DOCUMENT RESUME

ED 295 915 SP 030 263

TITLE	Increasing Educational Success: The Effective Schools Model. Prepared for the Subcommittee on Elementary, Secondary, and Vocational Education, Committee on Education and Labor. House of Representatives, 100th Congress, 1st Session.
INSTITUTION	Congress of the U.S., Washington, D.C. House Committee on Education and Labor.
REPORT NO	House-R-100-00
PUB DATE	Oct 87
NOTE	79p.; Serial No. 100-Q. Reprinted materials contain small type.
AVAILABLE FROM	Superintendent of Documents, Congressional Sales Office, U.S. Government Printing Office, Washington, DC 20402.
PUB TYPE	Legal/Legislative/Regulatory Materials (090)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Educational Improvement; *Educational Policy; Elementary Secondary Education; *Government Role; *Policy Formation; Public Schools; Research Utilization; *School Effectiveness

ABSTRACT

The purpose of this Committee Print on Effective Schools is to add substance to Congressional deliberation on legislation which addresses school improvement as a priority on the national educational agenda. The report provides the written views of some of the nation's leading educators, who have made important research contributions in the area of public school improvement--using Effective Schools research as a base for such improvement. New studies by Michael Cohen, Thomas Corcoran, Eugene Eubanks, and Daniel Levine are included, along with reprints of previously published studies by Ronald R. Edmonds, Stewart C. Purkey and Marshall S. Smith, Jere Brophy, and Maureen McCormack-Larkin. The report presents an objective assessment of the Effective Schools research, and its application in school systems utilizing Effective Schools concepts. (JD)

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ED295915

[COMMITTEE PRINT]

100TH CONGRESS
1st Session

HOUSE OF REPRESENTATIVES

REPORT
100-00

INCREASING EDUCATIONAL SUCCESS: THE EFFECTIVE SCHOOLS MODEL

PREPARED FOR THE

SUBCOMMITTEE ON ELEMENTARY, SECONDARY, AND VOCATIONAL EDUCATION

COMMITTEE ON EDUCATION AND LABOR HOUSE OF REPRESENTATIVES

U.S. DEPARTMENT OF EDUCATION
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OCTOBER 1987

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Serial No. 100-Q

Printed for the use of the House Committee on Education and Labor

U.S. GOVERNMENT PRINTING OFFICE
78-655 WASHINGTON : 1987

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

SP030263

78-655 - 87 - 1

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PREFACE

October 1987.

This report on the nation-wide Effective Schools movement provides the written views of some of the Nation's leading educators who have made significant research contributions in the area of public school improvement—using Effective Schools research as a base for such improvement. The authors' studies in the Effective Schools field and their comments, are varied and broad-ranged. They provide an objective assessment of the Effective Schools research, and its application in school systems utilizing Effective Schools concepts.

Some of the studies in this report have been previously published. The new studies, not previously published, particularly examine the relevance of the Effective Schools research for educational policymaking, especially as education policy is determined at the Federal level.

It is important that Members of the Education and Labor Committee have access to this report in light of the national dialogue on education reform and school improvement. I believe that such information can help Members in assessing avenues for Federal assistance in improving the Nation's schools, as part of the Committee's oversight and legislative purpose.

Our society's economic sectors and technological requirements are constantly and rapidly changing, impacting heavily on the Nation's workforce. Any key to these changes must significantly include the Nation's ability to educate its workforce, in order that the workforce keep up with the demands of change. Policymakers and lawmakers will be well served by this report's commentary on the Nation's educational system, and the role that the Effective Schools effort can take in improving this system.

AUGUSTUS F. HAWKINS,
Chairman, Committee on Education and Labor.

INTRODUCTION

As the Nation grapples with major economic and social problems in areas such as economic productivity and welfare reform, there is a growing recognition of the critical role education must play in developing long-term solutions to these problems. The Effective Schools research, the subject of this Committee print, has immediate and significant implications for the Congress and the Nation as efforts to improve our schools are undertaken.

When the National Commission on Excellence in Education released its report, A Nation At Risk, on April 26, 1983, the country was struck by the report's dire tone and gloomy outlook.

The Nation was at risk, according to the Commission, because, "Our society and its educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them."

Many educators disagreed with certain aspects of the report, observing that numerous public school systems had conducted reviews similar to the Commission's efforts. These school systems had already begun reforms to address their educational limitations.

In fact, the Commission, probably sensing the existence of educational reform efforts pre-dating its own inquiry, had commissioned a series of papers discussing a growing school improvement endeavor known as the Effective Schools movement. One of these papers, A Review of the Effective Schools Research: Implications for Practice and Research, concluded that "it is fair to say that effective schools programs are widespread, are being fairly well implemented, have promise for secondary improvement as well as elementary, and will expand in use over the next few years."

Interest in Effective Schools research by the U.S. Congress also pre-dated the Commission's report. In March 1980, Congressman Augustus F. Hawkins and then Congresswoman Shirley Chisholm co-sponsored a two-day conference on "Schools that Work—A Recommitment to Public Education." The conference discussed how to identify and promote models of school effectiveness. One of the key presenters at this conference, and one of the founders of the Effective Schools movement, was Ronald Edmonds, who at that time was the Director of the Center for Urban Studies at Harvard University.

For many years, Dr. Edmonds had challenged the view that family background was a more important teacher than a child's school experience, and therefore "schools don't make a difference." At Harvard University, at Michigan State University, and as a New York City school administrator, Edmonds put his Effective Schools research to practical application and concluded that schools can make a difference when they improve the quality of

their leadership, their expectations for student performance, and school climate. Edmonds noted that in his research on pupil performance, in the 20 elementary schools in Detroit's Model Cities neighborhood, that "pupil family background neither causes nor precludes elementary school instructional effectiveness."

The efforts by Edmonds and others launched the Effective Schools movement which is based on research and models of school effectiveness showing that instructionally effective schools have five characteristics that distinguish them from ineffective schools: First, strong leadership at the school level; second, high expectations that no child will fall below minimum levels of achievement; third, an orderly school atmosphere conducive to learning and teaching; fourth, students' acquisition of basic and higher order skills taking precedence over all other school activity; and fifth, frequent and consistent evaluation of student progress.

Effective Schools research primarily began in the inner cities of this Nation, among the children of the poor. An early pioneer in this endeavor was George Weber, who, in a 1971 study, examined four inner city schools in which achievement in reading was clearly high for poor children. Weber found that all four schools evidenced strong leadership by the school principal; high expectations for all students; an orderly school climate; strong emphasis on pupil acquisition of reading skills; and frequent evaluation of student progress.

Effective Schools research posits that teachers, principals, and schools control many educational elements that can improve student achievement, student behavior, and teaching and learning practices. The underlying assumptions in Effective Schools programs are: all children are educable; and, their educational outcomes derive primarily from the nature of the schools to which they are sent, not from the nature of the family or neighborhood from which they come.

It is not known currently the exact number of school districts with Effective Schools programs. Testimony before the Subcommittee on Elementary, Secondary, and Vocational Education indicated that, according to a 1985 National Institute of Education report, 7,500 schools in 1,750 school districts had Effective Schools programs. The actual total may be higher because many schools have informally adopted Effective Schools policies and because many more programs have apparently been started in the past year. The Committee is also aware that some 15 to 25 States have implemented Effective Schools programs. Approximately two-thirds of the programs are found in elementary schools. The programs tend to be well-represented in large and moderate-sized cities and in rural areas; but, they are less likely to be found in suburban areas.

To date, an impressive number of statewide Effective Schools programs, and local school district Effective Schools programs are experiencing reasonable to outstanding progress in improving academic performance.

For example, the Connecticut State Department of Education and the San Diego (California) County Office of Education have developed very productive technical assistance programs for schools and school districts that voluntarily commit themselves to participate in an Effective Schools effort. In this Committee print, the

study by Maureen McCormack-Larkin delineates the degree of improvement being experienced in one school district (Milwaukee) as a result of implementing an Effective Schools program.

There is no doubt that more study and research is needed to determine the dynamics of program implementation and impact within the school and in the classroom. However, several points are clear:

(1) The Effective Schools research findings are more than theory; a number of States, school districts, and schools have found the principles delineated by the research worthy of replication and have implemented them in actual school settings.

(2) Where these programs are being implemented, they are generally improving student academic achievement and providing other positive outcomes.

(3) The programs do not necesarily involve large amounts of funding.

(4) The Effective Schools techniques hold great promise for improving education in many other areas where they have not been tried. This is true for secondary school improvement as well as for elementary schools.

For those States and schools districts that have not yet explored these programs, Effective Schools efforts could expand appreciably over the next few years. Frequently, the Effective Schools concepts have remained untried because school officials are unfamiliar with the programs or the research evidence, because the leadership needed to initiate programs is lacking, or because school districts do not have the technical expertise or necessary start-up funding.

Recognizing the need for a responsive Federal role in encouraging the Nation's public school systems to explore ways to improve, Congressman Augustus F. Hawkins, on February 2, 1984, introduced the first Effective Schools bill in the 98th Congress (H.R. 4371, the "Effective Schools Development in Education Act of 1984"). During the 99th Congress, the House passed H.R. 4463, the "Effective Schools and Even Start Act" (June 17, 1986). H.R. 4463 was authored and introduced by Chairman Hawkins and Congressman Goodling and several other co-sponsors for the purpose of establishing programs to promote effective schools and to encourage joint parent-child educational approaches.

Work toward a Federal program supporting Effective Schools has continued in the 100th Congress. On May 21, 1987, the House passed H.R. 5, "The School Improvement Act," which would add Effective Schools language to the Federal compensatory education program (Chapter 1) and the Federal education block grant (Chapter 2).

The purpose of this Committee print on Effective Schools is to place in perspective the importance and the historical significance of the Effective Schools movement in the Nation's struggle to improve public school education. In providing this perspective, the Committee print presents the written views of some leading educators who have played prominent roles in the school improvement/Effective Schools dialogue. The authors of these studies present a varied, broad-ranged, and objective assessment of the Effective Schools research, particularly as an applied methodology.

These studies will add a significant knowledge-base to Congressional deliberation on legislation to address school improvement as a priority on the national educational agenda.

Overview of the Print

This Committee print on Effective Schools combines new work by some of the leading analysts in the field with a number of previously published studies that have contributed significantly to the research. The new studies, by Michael Cohen, Thomas Corcoran, Eugene Eubanks, and Daniel Levine, show the relevance of the Effective Schools research for educational policymaking at all levels, including the Federal level. They address the adequacy of the research base; the impact of the research on current school reform activities; the roles played by students, teachers, principals, district-level administrators, and State and Federal policymakers in reforming education. These new studies are reviewed below. A concluding section discusses the findings presented in the previously published reports.

NEW RESEARCH

Given the significance of the new studies prepared specifically for this Committee print, it is important to discuss what they found and what they suggest for Federal educational policymaking.

Effective Schools and State Education Reform

Michael Cohen, in "Effective Schools and State Education Reform: Implications for the Congress," provides an overview of the development and findings of the Effective Schools research base, and shows how this research base has served to undergird the school reform movement sweeping the country. Significantly, he delineates what the lessons of this research are for policymakers and describes some steps that might be taken at the Federal level to further educational reform.

From the research base, Cohen identifies four broad areas important for the development of Effective Schools: academic learning time; school-level instructional management and coordination; school climate and culture; and instructional leadership. Practitioners and researchers have over the course of the preceding decade learned a great deal about how teachers can improve the amount of time students spend engaged in learning a particular subject. Although less is known about how to realize a tight linkage among a school's curricular goals, instructional objectives, in-school activities, measures of performance, and personnel, he asserts that such a linkage is important for achieving effectiveness. The development of a strong sense of community among teachers, administrators, and students and an agreed-upon set of expectations about behavior help support curricular and instructional objectives. There is consensus, according to Cohen, about the importance of instructional leadership from the principal; how to achieve that is a matter of continuing research and debate.

Cohen states that policymakers, at all levels, have learned from this research that: (1) schools are able to make a difference in student performance; (2) schools are the basic building blocks for

achieving educational reform; (3) teachers' professional isolation must be reduced; and (4) outside support is necessary for school-level reform.

Cohen shows how the Effective Schools research base and the lessons that it teaches gave impetus to the nature and direction of recent State efforts to reform education. The influence of the research is seen in the establishment of higher standards and expectations for students and teachers, efforts to provide additional resources at the school level to teachers and principals, and activities to improve school climate and management. A second wave of reform, focused on restructured schools, draws even more upon the Effective Schools research. This second wave, according to Cohen, calls for restructuring that will break down barriers between teachers, empower teachers and principals, permit schools to address higher order skills more effectively, and provide schools with greater flexibility coupled with increased accountability.

In congressional deliberation on educational improvement, Cohen posits that what is needed are the following: (1) the application of the Effective Schools findings in schools with the greatest concentrations of educationally disadvantaged students; (2) continued support to replenish the knowledge base since current definitions of effectiveness are necessarily time-bound; (3) steps to sustain the current reform movement through, for example, programs to support models of restructured schools.

Role of the District in School Effectiveness.

Thomas B. Corcoran, in "The Role of the District in School Effectiveness," moves the focus of the discussion to an area of critical importance for successful implementation of effective school reform, but one for which the educational research base is extremely limited. Cohen states in his analysis that school-based improvement activities need support from outside the school; Corcoran delineates how important that support is, particularly that which flows to the school from the school district and district-level administrators. Corcoran's findings are significant for Federal education policy since the school district, not individual schools, is a primary actor in current Federal education programs.

District-level policymakers, Corcoran asserts, provide the context within which local schools and their faculty and principals can undertake reform activities. He states that school districts influence many aspects of schools' environments, such as attendance policies, curricular and other standards, the level of resources available, and how those resources are distributed. School improvement initiatives often originate or are mediated at the district level, giving districts control over such things as which schools participate, how the initiative should be viewed (e.g., a major restructuring or merely a source of additional resources), and the level of resources to be devoted to the initiative.

A significant part of the environment within which schools function is shaped by collective bargaining, an activity carried out at the district level. The barriers that separate school staff are clearly influenced by collective bargaining, according to Corcoran.

Corcoran identifies two models of district-level activity that have been derived from the Effective Schools research. One is seen in

practice through the proliferation of district-level Effective Schools projects that focus on defining instructional objectives, setting graduation requirements, increasing instructional time, ensuring that tests measure what is taught, and establishing district-level assessment of student performance. Corcoran views this as an effort by districts to take greater control over their schools. He is critical of this trend of top-down reform, positing that in the long run it may be counterproductive, exacerbating tension between school-level and district-level staff, lowering teacher morale, and narrowing the curriculum.

The second model for the district that has emerged from the research is that of a facilitating and protecting agent—encouraging school-level reform activities increasing school-level responsibility, and providing incentives for participation. Nevertheless, in this model, the district continues to set the broad context within which reform is carried out.

Corcoran concludes by describing the steps that districts can perform to improve the chances that Effective Schools efforts will succeed. Among these steps are: (1) determining which aspects of the operation of school systems belong with school-level personnel and which belong with district-level policymakers; (2) setting clear objectives for the school system; (3) defining the measures used to gauge schools' performance; (4) establishing ways of encouraging school-level personnel to identify their problems and to take steps to address them; and (5) treating school reform as a long-term activity.

By focusing on the school district, Corcoran shows that Federal activity to further educational reform might well be influenced by district-level practices and personnel. He suggests that efforts to foster positive relationships between schools and district management may be critical for achieving reform.

Administrative and Organizational Arrangements in Effective Schools

Eugene Eubanks and Daniel Levine, in their study, assess the organizational and administrative conditions necessary for implementation of Effective Schools programs in schools serving economically and educationally disadvantaged students, particularly those urban schools with concentrations of poverty children. Their analysis complements that of Cohen by arguing that current school reform activity, even that inspired by the Effective Schools research, cannot succeed in poverty schools unless certain fundamental shortcomings of those schools are addressed. They also stress, as does Corcoran, the importance of the organizational settings within which schools are found. Their key message is that Effective Schools reform may require a greater investment of resources for some kinds of schools than the research has heretofore suggested. These resources, according to Eubanks and Levine, are necessary *preconditions* for successful implementation of Effective Schools activities.

Eubanks and Levine focus on six broad areas of what must be addressed for implementation of Effective Schools programs in schools serving economically and educationally disadvantaged students: resources, organization, testing, secondary schools, adminis-

trators, and planning. Drawing from the literature and their own experiences, they counsel that resources be devoted to reducing class size, particularly in classes with high percentages of educationally disadvantaged children, to increasing the number of supervisory and technical assistance staff, to acquiring additional instructional materials and supplies, and to hiring more specialized staff.

The organization of schools and classrooms, according to Eubanks and Levine, is a key to creating effective schools. Among these organizational issues is the grouping of students for which, they posit, there is no single best approach. Nevertheless, concerns about segregating students by race or socioeconomic class suggest, to them, the importance of attempting heterogeneous grouping when possible. Another important organization issue, with implications for Federal policy, is the coordination between regular instruction and compensatory education, such as that supported by Chapter 1 of the Education Consolidation and Improvement Act of 1981. Eubanks and Levine are critical of "pull out" arrangements through which educationally disadvantaged students are removed from their regular classes in order to receive compensatory education.

The authors find that testing can be both harmful and beneficial for school effectiveness. Testing that stresses basic skills has prompted instructional strategies that have successfully improved student performance at this level. This improvement, they suggest, has come at a cost of narrowing the curriculum to lower order skills, leaving students without higher order skills, such as problem solving. Eubanks and Levine assert that administrators must use testing to increase the acquisition of higher order skills.

Urban secondary schools, according to the authors, pose particularly difficult problems for school reform, requiring creation of alternative structures, (e.g., schools within schools), strengthened faculty, and increased numbers of support staff.

Eubanks and Levine posit, as does Cohen, that leadership is critical for the development of effective schools, They advocate better pre-service and in-service training of administrators through paid internships and other arrangements for providing management experience. They link leadership skills to the creation of productive school climate.

They state that systematic reform of schools serving economically and educationally disadvantaged students succeeds or fails depending upon the kind of planning performed. Among their guidelines for planning are limiting the number of objectives schools seek to achieve; targeting plans to central instructional issues; and incorporating the Effective Schools research findings into plans in ways that show what steps need to be taken.

Eubanks and Levine conclude that there are certain prerequisites for the reform of schools serving the educationally and economically disadvantaged. The first task is to secure requisite resources; the second is to develop new ways of utilizing those resources. In essence, Eubanks and Levine assert that the financial and other capabilities of individual schools and school systems provide a context influencing whether Effective Schools activities will or will not succeed.

PRIOR RESEARCH

The previously published studies included in this Committee print serve two functions: (1) they provide some of the material that comprises the research base; and (2) they cover key aspects of the research base only briefly addressed by the new studies.

Ronald R. Edmonds, one of the key participants in the development of the Effective Schools research base, is represented with an article reviewing Effective Schools projects conducted in the early and mid 1970's, and delineating how research and practice can interact.

Stewart C. Purkey and Marshall Smith discuss the shortcomings of the primary research that forms the Effective Schools research base. Although these limitations, in Purkey and Smith's view, are significant, they nevertheless conclude that the school culture is a critical component of effectiveness, and that research on schools that appear effective does reveal important characteristics of such schools.

Jere Brophy's article, through its focus on effective teaching methods for educating disadvantaged children, demonstrates that the research base offers, not only characteristics associated with effectiveness, but ways of achieving improvement within the classroom. It further signals that the research base identified with Effective Schools has expanded.

Finally, Maureen McCormack-Larkin moves beyond the research to provide a detailed look at how one applies the Effective Schools research in a specific project. She delineates the positive results being achieved by that project.

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Effective Schools and State Education Reform: Implications for the Congress

(By Michael Cohen, Director of Policy Development and Planning, the National Association of State Boards of Education)

INTRODUCTION [1]

Recent years have witnessed a rare circumstance in which the pressure for educational reform and improvement have coincided with the availability of a well developed knowledge base to guide and inform the development of reform initiatives. Both state and local governing bodies have increasingly turned to educational research, and to research on effective schooling practices in particular, to inform their deliberations over education improvement initiatives.

Consequently, the Effective Schools research now enjoys fairly widespread currency, from the state house to the school room. Thousands of schools have been involved in effective school programs, sponsored variously by local school districts, regional educational laboratories, state education departments, and colleges and universities. Countless numbers of teachers and administrators have been trained, or at least exposed to, some portions of the research findings, in workshops and conferences sponsored by state and national educational organizations. As far back as 1979 and 1980, newspapers throughout the nation began carrying stories on the characteristics of Effective Schools, highlighting both the research findings and local success stories at the same time. In the early 1980's and continuing to the present, state policymakers and the blue ribbon task forces they appointed incorporated the Effective Schools research into a spate of reform proposals, ranging from increasing performance standards, lengthening the school year, developing discipline policies, improving teacher and administrator training, and the like. By now, many governors can summarize the Effective Schools research as well as can researchers, and the research forms a good deal of the intellectual foundation for the National Governors' Association call for continuing educational reforms, "A Time For Results."

The purpose of this paper is to provide the Congress with a perspective on the Effective Schools research that can inform its own efforts in this area. The paper is organized into three sections. The first provides an overview of the Effective Schools research, briefly tracing its origins, summarizing key findings, and highlighting its major implications for school improvement. The second section overviews recent and likely state educational reform efforts, and

[1] Preparation of this paper was supported in part by funds from the Ford Foundation and the Matsushita Foundation.

indicates the way in which they have drawn on the Effective Schools research findings. The third and final section will include suggestions for Congressional initiatives which grow out of the first two sections.

Effective Schools Research: An Overview [2]

Since the mid 1970's, our understanding of schooling practices that produce higher-than-expected student achievement, and are largely subject to the influence of teachers, principals and local and state policymakers has grown substantially. Significantly contributing to the development of this knowledge base are a small number of studies which have compared more and less effective elementary or secondary schools serving predominately urban, poor and minority students. Typically, these studies identified schools serving similar urban populations, some of which showed relatively high levels of student performance on standardized tests of basic skills, while others had more predictably low levels. Once more and less Effective Schools had been identified, researchers systematically observed and compared the differences in the educational practices employed in the two sets of schools, and were able to identify those that contributed to increased school effectiveness.

Generally speaking, these studies found that a school in which the principal and instructional staff agree on their goals, believe they can achieve them, provide an environment conducive to accomplishing their daily tasks, and monitor their effectiveness and adjust their efforts and practices based on such feedback, is likely to be an effective one.

Importantly, the findings from these most visible Effective Schools studies have been supported, extended, and specified by literally hundreds of studies on specific schooling practices. Research has been conducted on such issues as effective instructional practices, the effects of teacher expectations, classroom management practices, school and classroom climates, principal leadership, staff development, and many other aspects of schooling. When considered together, the findings from these studies provide a firm grounding for identifying the most important educational practices, and for understanding how they can be incorporated into the daily routine of the school.

SYNTHESIS OF EFFECTIVE SCHOOLS RESEARCH

A number of scholars have synthesized the Effective Schools research; every author takes a slightly different approach, and has generated a slightly different list of Effective Schools characteristics. Thus it is important to remember that while you might see

[2] In order to make this paper more readable, I've ignored the convention of citing references for each finding discussed in the paper. For further reading and additional references, interested readers should consult: (1) Cohen, Michael. "Instructional, Management and Social Conditions in Effective Schools." In Allan Odden and L. Dean Webb (Eds.) "School Finance and School Improvement: Linkages for the 1980's." pp. 17-50. Cambridge: Ballinger Publishing Co. 1983. (2) January 1985: Special Issues of The Elementary School Journal. Special Issue on Policy Implications of Effective Schools Research. March 1983: Special Issue on Research on Teaching: Implications for Practice. (3) Reaching For Excellence: An Effective Schools Sourcebook. The National Institute of Education. Washington, D.C.: U.S. Government Printing Office, 1985. (4) Pipho, Chris. "States Move Reform Closer to Reality." Phi Delta Kappan. December 1986.

different versions of the "factors contributing to school effectiveness", the differences are only superficial while the underlying research is quite consistent. I've chosen to categorize the research findings into four broad categories:

Classroom Teaching Practices;
School-level Instructional Management and Coordination;
School Climate and Culture;
Instructional Leadership.

Classroom Teaching Practices

Perhaps the most important classroom variable determining student achievement is what researchers have come to call "Academic Learning Time" (ALT). This refers to the amount of time a student spends engaged in a valued academic task he or she can perform at a high rate of success. An index of ALT has been found to be significantly correlated with student achievement. This suggests that a primary objective of classroom teachers needs to be to ensure that each student spends an adequate amount of time working with materials and activities that enable him or her to master particular learning goals, and then have sufficient practice so that the student develops a firm grasp of the new content.

A number of teaching practices and strategies have been found to enhance academic learning time, and therefore student achievement. For example, specifically for young students or slow learners, *active, direct instruction* in which teachers clearly structure and explain what is to be learned, present new materials in small amounts, provide ample opportunity for student practice, provide feedback and, if necessary, additional instruction and practice opportunities to students, works well. Teachers' *classroom management and planning skills* are also important, because they enable teachers to minimize learning time lost to disruptions, transitions and other procedural tasks, and because they enable teachers to select learning activities well suited to student's performance levels. *Teachers' expectations and sense of their own efficacy* are important as well. Teachers who have high expectations, and who believe they can affect their own students' learning, also believe that instructing students in curriculum content is important and accept responsibility for teaching, and reteaching if necessary, until students master content. They create a business-like task oriented environment. Through clear instructions to students, their choice of materials and activities, and careful monitoring of students, they create classrooms in which students are held accountable for their work. This sense of efficacy and concomitant positive expectations are especially important to classrooms with large concentrations of low-achieving students, for it is apparently easy for teachers to let the previous low academic performance of students translate into low expectations about subsequent performance.

Though the specifics of these teaching practices are crucial for educators to know, they are relatively unimportant to Congress. However, there are several things about research into effective teaching practices which *are* important for Congress to be aware of.

First, we do know a fair amount about what good teaching is, and much of what we know with confidence derives from a decade

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worth of educational research Congress has supported through the National Institute of Education (NIE) and the Office of Educational Research and Improvement (OERI). Over time, modest investments in research are beginning to pay off handsomely.

Second, we know how to train teachers in the effective teaching practices. There are a number of programs for training current teachers which are based upon or otherwise incorporate these research findings. As a result of these programs, many teachers improve their own teaching practices and the academic performance of their students.

Third, these same findings are useful for training school principals as well. Knowledge of these findings, for example, can help principals better observe and evaluate their teachers. They also provide principals with a framework that can improve their management practices, by enabling them to focus such disparate tasks as scheduling, discipline, and staff development around the theme of increasing instructional time for students.

Finally, it is important to recognize that there are healthy debates underway in the profession—among researchers and practitioners alike—about the *limitations* of this research, as well as its benefits. For example, most of the research findings cited above are derived from studies of teaching elementary school students basic reading and math skills. There is disagreement about how readily these findings can be applied to teaching high school students, to teaching science, social studies, or other subject matter, and to teaching higher level skills such as problem solving.

These debates are important, and are serving to stimulate further research. Consequently, over time our knowledge base will continue to evolve and develop further.

School-Level Instructional Management and Coordination

In general, research on school-level practices is less well-developed than research on classroom-level practices. Studies are fewer, findings across studies are less frequently replicated, and descriptions of specific practices are fewer. Nonetheless, with respect to the management and coordination of instruction, several themes emerge.

There is general agreement that the curriculum and the instructional program in Effective Schools, especially in elementary schools, is tightly coupled. Essentially, this means that school goals, grade level and classroom instructional objectives, instructional content and activities, and measures of pupil performance are all carefully aligned. Students are exposed to a well-ordered and focused curriculum and the instructional efforts of teachers and other instructional staff are consistent and cumulative.

This close relation among elements of the instructional program has several implications. First, schools should have instructional goals that are clear, public, and agreed upon, that form the basis of the selection of objectives, content, and materials, and that are developed through some type of planning process implemented at the building level. Second, differences among classrooms in time allocated to the same content should not be extreme. Extreme differences probably reflect the substitution of teacher preferences for

formal school goals and expose children in different classes to functionally different curricula that are not adequately matched to school goals or performance measures. Consequently, tight coupling implies that norms granting autonomy to teachers behind the closed door of the classroom carry less weight than the shared goals of the professional staff. Third, expectations and instructional activities of nonclassroom specialists (e.g., resource teachers, reading specialists) should support the efforts of classroom teachers. Fourth, a well-coordinated instructional program seems to require the use of achievement tests or other student performance measures, to focus instructional efforts and to detect programmatic weaknesses. Fifth, tight coupling implies an overlap between the content of instruction and the content of material used to measure pupil performance.

School Climate and Culture

A number of studies and analyses suggest that Effective Schools generate a strong sense of community, with commonly shared goals and high expectations for student and staff performance and mechanisms for sustaining motivation, commitment, and identification with school goals.

The norms and values that unite individual members of a school into a cohesive community are academic as well as practical and social. Positive expectations for student performance communicate the primacy of the instructional mission of the school, and the obligation of both teachers and students to participate in it. Community in schools also requires the creation of a moral order, which entails respect for authority, genuine and pervasive caring about individuals, respect for their feelings and attitudes, mutual trust, and the consistent enforcement of norms that define acceptable behavior. Such a strong social order creates an identity for the school, provides meaning to membership in it, and reduces alienation. This type of school climate not only increases achievement but also improves student behavior and attendance, and reduces the incidence of delinquency.

The importance of a shared moral order should not be underestimated. Schools are fragile social institutions, easily disrupted by conflict in or around them. Compared to other types of organizations, formal controls over the selection and activities of staff are weak, and especially in public schools, control over the selection of students is limited or nonexistent. Students, in turn, are the involuntary clientele of the schools; their willing engagement in the formally prescribed activities of the school must be treated as problematic, rather than taken for granted. The situation is further complicated because teaching and learning requires not only compliance but also commitment and engagement. Under such circumstances, schools cannot rely simply on coercive power to bring about order. Rather, schools are normative organizations that must rely on the internalization of goals, the legitimate use of authority, and the manipulation of symbols to control and direct the behavior of participants. Therefore, a shared moral order is an important precondition for effective instruction.

There is useful research regarding more specific aspects of school cultures that influence achievement. In particular, work norms among faculty appear to be especially important determinants of school effectiveness. One set of studies highlights two norms that contribute to successful schools. One norm is collegiality—the notion that the work of teachers is shared work, not work to be done exclusively in the isolation of the classroom. Successful schools, then, are characterized by a large number of interactions, involving a large proportion of the staff, about numerous aspects of teaching. Extensive interactions and the expectations that they will and should occur are powerful mechanisms for integrating the work of the school and generating commitment and shared values among teachers.

A second norm, that of continuous improvement, reflects the expectation that all teachers continue to improve instructional practice, not just beginning teachers. Such a norm is enacted in schools through continuous analysis, evaluation, and experimentation with instructional practices. When both of these norms are present and salient in a school, there will be: frequent talk among teachers about the practice of teaching (as distinct from talk about the backgrounds of students, the influence of external environments on schools, etc.); frequent observation of teaching by teachers; and teachers working together to plan, design, research, and prepare materials for teaching. These practices, in turn, are likely to result in the development of shared values and a commitment to improve instructional effectiveness.

Other research also highlights the importance of teacher collegiality. One study compared teachers in a traditionally organized junior high school with teachers in a multi-graded, team-oriented middle school, each school of comparable size and serving comparable student bodies. Among other things, they found that the team organization, which required collective decisionmaking about instructional matters, and the multi-graded organization, which ensured that teachers on the same team instructed the same students, enhanced teacher efficacy. Teaching became shared work, and sustained interaction focused on solving the problems of students and improving the practices of teachers. Professional isolation among teachers was reduced. Furthermore, enhanced efficacy was frequently reflected in more positive classroom teaching.

There is also considerable evidence to suggest that student norms and interactions are powerful determinants of school effectiveness. Peer groups provide important role models and informal rewards for students. They often powerfully shape students' perceptions of the importance of schoolwork and influence the extent to which a student commits time and energy to academic work. Peers are also potentially important instructional resources since under certain circumstances they can provide tutoring and other forms of help to their classmates.

Evidence is growing that peer group norms and peer interaction in schools are not determined solely by the characteristics of students or their family backgrounds. Rather, to a considerable degree, they are responses to the structure and climate of the school and classroom, as these are shaped by teachers and administrators. For example, research findings indicate that the placement

of students in curricular tracks, classrooms and instructional groups influences students' choice of friends, patterns of interaction, and academically relevant group norms.

In short, the evidence suggests that schools are more effective when informal norms governing faculty and student behavior are consistent with formal academic goals. It further suggests that organizational aspects of the instructional program, as well as the leadership by the principal, can create an environment that supports instructional improvement and furthers student learning.

Instructional Leadership

There is near universal agreement among researchers and educators alike regarding the importance of instructional leadership for school effectiveness. Further, there is also nearly universal consensus that the building principal needs to play a major (though not always exclusive) role in providing instructional leadership. There is considerably less agreement, however, on the particular strategies, tactics and behaviors which constitute effective leadership on a day-to-day basis. This is partly a function of the relative infancy of research on the work of principals; there has been far less study of the role, behaviors, and effectiveness of principals than there has been of teachers. It is also partly a function of the nature of leadership itself, because leadership is often symbolic, indirect, and highly varied from situation to situation. Nonetheless, there are some aspects of the instructional leadership role of the principal which are increasingly coming into focus as research in the area progresses.

First, *leadership is situational in nature.* In order to be effective, a principal's leadership style has to be matched to the particular conditions in the school. For example, principals working with experienced and highly professionalized staffs might employ rather indirect leadership styles, simply suggesting ideas of raising questions with individual staff members, and otherwise providing the necessary resources and latitude for good teachers to carry out good ideas. In contrast, in schools with inexperienced staff, the principals may need to employ much more direct supervisory strategies.

Second, *leadership is visible.* Regardless of their particular leadership styles, effective principals have a visible presence in their schools. They accomplish this by spending a good deal of each day in the halls, classrooms, lunchroom, library and all other locations in the building. Because of their visibility, effective principals are aware of developments within the building and have a constant flow of information available to them.

Third, *leadership requires a vision of instructional improvement.* Effective principals articulate this vision to the staff and others in the school, and use this vision to guide their many daily interactions. In instructionally effective schools, this vision takes the form of an emphasis on achievement. Effective principals tend to emphasize achievement by setting instructional goals, developing performance standards for students, and expressing optimism about the ability of students to meet instructional goals.

Put somewhat differently, effective principals are keenly aware of the classroom factors which promote achievement, and have a conception of the variety of strategies and tactics they can use to strengthen those practices.

What is being suggested here is that the specific leadership behaviors and strategies of principals, of necessity, will vary from school to school depending upon both the context of the school and the personality of the principal. Having said that, however, a constant characteristic of effective instructional leaders is that they have a clear sense of the particular "levers" in their school which can be used to influence instruction, and they deliberately go about working those levers to create and sustain conditions which promote effective instruction.

Fourth, *leadership focuses on school culture as well as to technical instructional practices.* As suggested above, the social aspects of schooling, the ethos of the school, are critical preconditions for the enactment of technically sound instructional practices. Effective principals recognize this, and employ strategies to strengthen the school culture. These often involve the use of rituals, such as pep rallies, assemblies, reward programs, and the like, which provide meaning to school membership, identify and celebrate achievement and success in school life, and define valued behaviors. These tools can be used to highlight and reward academic success for students.

Principals can shape the work norms among faculty. They can announce that they expect staff to be knowledgeable about effective practices and to participate in efforts to improve instruction. They can model desired behaviors by participating in instructional improvement activities themselves. They can reward teachers who are effective and who are trying to improve. Finally, they can protect teachers who are implementing new practices from a variety of competing demands on their time and energies, in order to improve the likelihood of success for those teachers.

Lessons From Effective Schools Research: Implications for School Improvement

The findings reviewed above contain important lessons for policymakers outside the school, such as local school boards, state legislatures and state boards of education, or the Congress, interested in improving education. Among the more important of these lessons are the following:

(1) Schools can make a difference.—As Congress immerses itself in the details of how schools can be more effective, it should not lose sight of a more fundamental point; namely, that schools can be more effective. This stands in stark contrast to the prevailing wisdom of the late 1960's and early 1970's. As part of the 1964 Civil Rights Act, Congress commissioned a study on "Equality of Educational Opportunity" (also known as the Coleman Report) which examined the relationship between school resources and student achievement. This and other studies conducted at the time found that various school characteristics had relatively little impact on student achievement, when compared to the influence of family background. The finding was widely misinterpreted that "schools don't make a difference"—that there is nothing that schools can do

to overcome the disadvantages produced by minority group status and poverty.

By virtue of a number of conceptual and methodological advances—advances sponsored in part by the creation of the National Institute of Education in 1973—researchers have been able to identify and describe school characteristics which do make a difference, especially for students from poor and minority backgrounds.

Thus, while no one seriously debates the importance of family background, we no longer believe that schools are unable to effectively teach students from all backgrounds. And this shift in beliefs has had important symbolic value, both for raising the performance expectations teachers and administrators have of their students, and for mobilizing public and political and support for school improvement.

(2) The school is the fundamental unit of reform.—The Effective Schools findings are generally understood to imply that educational reform efforts have to be targeted primarily to the school building as an institution, rather than to individual teachers or entire school districts. This is in part accidental and tautological: when you look for effective schools, you are likely to conclude that schools (rather than teachers or districts) are where the action is. More importantly, however, it reflects appropriate recognition of the effect that the school context, especially the behaviors of the principal and the teaching staff, has on the teaching strategies and practices of individual teachers. Consequently, not only is the school seen as the primary unit of reform, but there is a growing consensus that schools require considerable autonomy and discretion in determining their own policies and standards.

(3) School improvement should reduce the professional isolation of teachers.—Related closely to the point made above, the research strongly suggests the importance of increasing the opportunities for teachers to work together with their peers. Historically, teaching has been a profession in which work is typically performed in isolation from one's colleagues. This has had several undesirable consequences, including the limited codification of successful practices and the virtual absence of systems to provide ongoing technical support to teachers when needed. In Effective Schools, however, teachers frequently work and interact with each other. They are involved in staff development programs together, offer and receive assistance from one another, and share ideas and experiences about teaching. Consequently, their morale is often higher, their enthusiasm greater. And, under these circumstances, teachers are often more willing to experiment with new approaches, and are more effective in meeting their students' needs. Significantly, recent proposals for the reform of the teaching profession recognize the need to create structures which increase the likelihood that teachers will interact collegially with one another.

(4) School staff cannot engage in school improvement efforts on their own.—Meaningful and sustained changes in schooling practices require support and assistance from outside the school, in the form of technical assistance and training, leadership and guidance, and resources. While the individual school buildings should be the unit of reform, the role of the local superintendent in providing leadership, in the form of both pressure to improve and assistance

and resources to support improvement, is critical. Further, particularly with respect to the implementation of complex improvements based on the Effective Schools research, it needs to be clearly understood that implementation and improvement are long-term processes which unfold over a period of years.

State Education Reform Initiatives: Linkages to Effective Schools Research

When the National Commission on Excellence in Education issued "A Nation At Risk" in 1983, most states were already at work developing their own education reform initiatives. Between 1983 and 1984, virtually every state had at least one blue ribbon task force or commission developing reform proposals and building support for their enactment. Nationwide, there were over 200 such task forces at work, and their efforts unleashed a flurry of new policies, programs and initiatives, and, in many states, new education dollars from state legislatures as well.

One of the hallmarks of this reform movement has been the extensive involvement of political and business leaders from outside the traditional education community. Responding to both increased public concern over educational quality and a clear recognition of the importance of education to state and national economic health, governors and legislatures, often with strong support from the business community, provided more money for schools. New dollars, however, were not simply to fund "more of the same" educational practices. Rather, they were linked to policies demanding both different and presumably better ways of providing schooling.

The education reform packages across the states defy any simple description. Each state has crafted its own package, through some combination of legislation, state board regulation, and state education agency initiative. Consequently, state reform packages vary considerably in terms of their specific content and focus; in whether reforms were packaged into a comprehensive bill or enacted piecemeal by the legislature and state board; in the number of specific initiatives; in the policy instruments employed (e.g. mandates vs. incentives); in their implementation schedules; and in their cost and the level of new resources supporting them. Further, states approached reform against very different starting points. States vary considerably in terms of their initial levels of education funding and the proportion of education costs paid by state government. They differ with respect to traditions of local control and the role of the state. And they vary considerably with respect to the performance of their education system.

Despite these differences, it is possible to discern some major trends and similarities across the states. In the remainder of this section, we will examine the major types of reform initiatives, and, where possible, consider their connection to the Effective Schools research.

INCREASED STANDARDS

Virtually every state has taken some steps to raise performance standards in education. These standards affect three broad classes

of actors: students, teachers and other education personnel, and schools and school districts.

With respect to students, some 45 states increased their high school graduation requirements. These efforts typically involved an increase in the number of credits required for graduation. In other instances, states more tightly specified the distribution or required courses, without increasing the total number of credits required for graduation. These efforts generally required students to take additional math, science, language arts, or social studies courses in order to graduate.

States also continued the trend, started in the 1970's, of increasing testing of students. This generally involved increasing the number of required tests, the grade levels at which testing is required, or the number of subject areas in which students are tested. In some states satisfactory test scores are required before students are passed on to the next grade, and in more states students are required to pass a competency test before graduating from high school.

Finally, standards have frequently been increased for student participation in extracurricular activities and interscholastic athletics. Best known as "no pass no play", these rules require students to maintain minimum grade point averages or receive a minimum number of passing grades before they are eligible to participate in extracurricular activities.

Generally, increasing performance standards, for students was intended to communicate higher expectations for student performance. And, requirements for students to take particular courses or subject matter reflects research linking student achievement to the amount of time allocated to teaching particular content. Thus, while not driven directly by the Effective Schools research, these initiatives demonstrate some diffuse connection to the findings.

States have also moved to raise performance standards for education personnel as well, particularly for teachers. Such efforts include raising minimum grade point average for either entering or completing teacher education programs. Competency testing for initial teacher certification is now widespread, with teaching candidates now required to pass basic skills, subject matter, or pedagogical knowledge tests in many states. At least two states, Arkansas and Texas, also required existing teachers to pass basic skills tests in order to retain their certificates.

Another mechanism for raising performance standards for teachers in many states has been new requirements for teach evaluation. In some cases, these requirements provided for uniform statewide evaluation procedures, while in other cases local districts were required to develop their own procedures. In moving to implement these requirements, most state boards of education and state education agencies relied heavily on the research findings on effective teaching practices to develop the content and observation procedures for the teacher evaluation instruments.

Less prevalent than increased standards for teachers are new standards for administrators and local school board members. A small number of states have moved to raise certification standards or institute evaluation requirements for principals and other ad-

ministrators. A few states also now require local school board members to undergo training as well.

School districts, and in some cases individual schools, were the focus of state efforts to raise standards as well. Relying on their authority to define educational programs and accredit local school districts, states took a number of steps. Often linked to increased testing or high school graduation requirements, states enacted a number of curricular reforms. These typically involved strengthening state curriculum guides or mandates, developing curriculum guidelines or mandates for more grade levels or additional subject areas, or adding specificity to existing curriculum guidelines. In addition, states often required local districts to provide more course offerings, often foreign languages or advanced level courses in high school. There were often new requirements for local districts to lower class size and provide additional guidance counselors and other services for students.

The new standards perhaps most directly tied to the Effective Schools research are those efforts underway in such states as Mississippi, South Carolina, Arkansas, Vermont and Indiana, in which the Effective Schools findings were built directly into school district accreditation standards. Traditionally, accreditation standards have focused on assuring that local districts provided minimum levels of resource (e.g., certified teachers, libraries) or program offerings for students. In these states, however, there is an effort to also ensure that local districts engage in the educational practices which are linked to effectiveness. In these states, accreditation standards now reflect such factors as school climate, instructional leadership, staff development, clear instructional goals, and the like.

STRENGTHENING EDUCATIONAL PRACTICES

Most of the efforts to raise standards show only a weak connection to the Effective Schools research. In general, they reflect an attempt to mandate uniform practices throughout the state, and are aimed at raising the performance levels for the lowest performing students, teachers and districts. In contrast to these approaches are another set of state strategies which are more directly aimed at strengthening and improving core teaching and schooling practices such as teaching and instruction, school management and principal leadership, and school climate. Generally speaking, instead of promoting greater uniformity throughout the state, these strategies more nearly reflect, and are responsive to the diversity of need at the local level. And, perhaps more than the provision of large amounts of new dollars, they require increases in the provision of support and services to teachers, principals and schools, for their implementation is more complex. Finally, they show rather careful attention to the Effective Schools research and focus directly on incorporating the research findings into school practice.

Efforts to directly strengthen educational practices are evident in state efforts to provide training for teachers and administrators, ongoing technical assistance to schools, and new structures which facilitate local implementation of Effective Schools practices.

A number of states have instituted efforts to provide training to existing teachers, or have employed other means to strengthen teaching practices. For example, since the late 1970's Arkansas has had a voluntary, statewide inservice training program for teachers, based on research on classroom management and effective teaching practices. By 1984, something on the order of two-thirds of all classroom teachers had participated in the training program. Another approach is illustrated by Maryland, which approached instructional improvement by creating demonstration sites, based on four research-based models of classroom teaching, in every school district in the state. The state provided extensive training in the demonstration sites, and resources to provide technical assistance for other interested schools as well. And a growing number of states, such as Virginia, have instituted new programs for beginning teachers, in which major teachers provide support and assistance to new teachers in their first year of practice.

Additional training and support for principals has been a common factor of many reform efforts. Nearly 30 states have established statewide academies for principals and other administrators, which provide intensive training in school management and instructional leadership. The LEAD program recently enacted by Congress should serve to increase the number and expand the reach of these and related efforts.

A growing number of states have acted to provide direct technical assistance to individual school buildings to implement the Effective Schools research, in the form of Effective Schools or school improvement programs. In states such as Connecticut, Minnesota, and South Carolina, state education department staff work directly with personnel in individual school buildings to review the research, assess current practice in light of the research, identify areas needing improvement and develop and implement ongoing improvement efforts.

Finally, states are also beginning to change the organizational structures of schooling to increase the likelihood that effective schooling practices can and will be employed. These efforts have taken a number of forms. South Carolina and Florida are piloting school incentive programs, in which performance goals are established for schools, in such areas as student performance and attendance, or parental satisfaction. Schools which meet or exceed the goals are provided with small amounts of discretionary dollars, to be used for school improvement purposes. Efforts such as these are likely to increase goal orientation and goal consensus within the school, provide an incentive for collaborative school improvement efforts, and provide discretionary resources with which schools can develop programs tailored to their own specific needs.

A number of states, including Tennessee, South Carolina, Virginia, and Utah, are experimenting with various forms of career ladder programs. The common features of these programs (which otherwise vary considerably from one another) create and pay for nonclassroom instructional roles for teachers, such as developing new curriculum materials, engaging in staff development, leading instructional improvement teams, or providing assistance to beginning teachers. From the perspective of the Effective Schools research, these efforts can be seen as attempts to alter the structure

of the school and the teaching profession in ways that promote norms of collegiality and continuous improvement, and break down the isolation of classroom teachers, from their peers.

A Second Wave of Reform

Even as the reform efforts discussed above are being implemented, recent reports from the National Governors' Association, the Carnegie Forum on Education and the Economy, and the Holmes Group, call for far reaching and dramatic restructuring of schools in ways which go well beyond anything yet attempted by states. To a considerable extent, the recommendations from these groups reflect a recognition that dramatic changes are needed to enhance the professionalization of teaching and its attractiveness to talented individuals. They also reflect a growing recognition that the traditional structure and organization of schools place several limits on possible increases in educational effectiveness, even in light of what we know about effective schooling practices.

As schools are presently organized, staffing arrangements and the use of time in schools combine to leave relatively little time for teachers to prepare for instruction or review student work. There is even less time or opportunity for the development of collegial working relations among faculty. Further, though the Effective Schools research suggests that schools need to develop the capacity to identify programmatic needs based on student performance, and implement new programs and practices in response to those needs, few schools are capable of sustained effort of this sort. This is because schools are not organized in ways which adequately build responsibility for these efforts into clearly defined roles for staff members. Rather, they tend to get addressed on an ad-hoc basis, if at all, and are rarely sustained over a period of years.

Similarly, typical instructional arrangements in schools appear to be better suited to teaching students lower level cognitive skills than they are at helping students master the more complex and difficult skills of problem solving, original thinking, analysis, and the like.

These problems and others arise directly out of the structure of the school. They are a function of the use of time in schools, the organization of staff roles, the structure of the curriculum, and the distribution of authority within schools and among levels of educational governance. And, because these problems are rooted in the structure and organization of schools, their resolution lies ultimately in reorganizing school structure.

While no one yet has a very clear picture of what restructured schools ultimately will look like, the Carnegie Report advanced perhaps the most well developed vision of what needs to be addressed in the process. Among the steps suggested in the Carnegie report include:

(1) *More authority for teachers,* individually and collectively, to make educational decisions for their school regarding how best to meet learning goals for students. The report calls for teachers to have considerable control over such matters as the curriculum and curricular materials to be used, the nature of the instructional

practices to be employed, the use of time, and the formation and size of classes and other instructional groups.

(2) *Additional staff support for teachers,* so that teachers have access to aides, instructors, clerks, secretaries and the usual array of support staff that other professionals routinely rely on. In addition, the report called for more extensive use of peer tutoring among students as an instructional strategy.

(3) *More differentiation in the roles and responsibiiities of teachers,* in ways which build upon and extend early experiments with career ladders. This includes the creation of a national certification board for teaching, and the creation of lead teachers who would assume considerable authority for instructional leadership and support within the school.

(4) *Considerably more pay for teachers,* to make the rewards for teaching competitive with those in other professions.

(5) *More varied school leadership structures,* in which leadership teams or partnerships of teachers, rather the school principal, would be responsible for providing school-wide instructional leadership.

(6) *More discretionary dollars for schools,* so that the primary resource allocation decisions are made at the school building level, rather than by the central office of the school district. This would give school staff considerably greater leeway in purchasing materials, training, outside assistance, and in determining the number and configuration of instructural staff in the school.

(7) *More accountability for teachers and schools.* In exchange for the considerably greater discretion with respect to the means of education, educators would be held more strictly accountable for the outcomes of their efforts. This implies a greater role for the states in establishing educational goals and performance standards, and requires a more sophisticated approach to student testing and assessment. It further requires that states dramatically alter the regulatory environment for education, considerably reducing their efforts to regulate educational programs and practices.

States are just beginning to turn their attention to the policy agenda implied by these recommendations. And while there appears to be considerable interest in them, it is likely to take most states a long time to act on these. This is partly due to the dramatic and complex nature of these recommendations. It is also due to the fact that most states are still digesting the last round of reforms, and can't easily turn their attention to a new agenda yet.

Implications for Congress

The preceding sections of this paper demonstrate that much has been accomplished thus far. We have developed a substantial knowledge base which can, and has, informed and guided a broad array of school improvement efforts. And state leaders have made substantial fiscal, policy and political investments in strengthening public education, and seem prepared to make additional investments in the future. These accomplishments notwithstanding, there is more to be done, and important roles for Congress to play. More specifically, Congress should consider steps which will: encourage the application of the Effective Schools research in those

schools with the greatest need and where it can have the greatest impact; ensure the continued supply of research and information on effective schooling practices; and provide support and leadership for continuing the education reform movement.

APPLICATION OF EFFECTIVE SCHOOLS RESEARCH

The schools that could most clearly benefit from the application of the Effective Schools research are those serving predominately poor and minority students. These are the schools which typically have the lowest achievement levels and whose students are most frequently at-risk. These are also the schools where the effective schooling practices have most consistently been associated with increases in student achievement.

Through Chapter 1, Congress already targets resources to such schools with disadvantaged populations. *Through the reauthorization of Chapter 1, Congress should consider ways of enhancing the effectiveness of Chapter 1 services through the application of the Effective Schools research.* The goal here is to enhance the effectiveness of Chapter 1 programs by increasing the likelihood they will operate in schools with clear goals, well articulated curricula, sound leadership, supportive environments, and other factors associated with success.

One way to accomplish this would be through the schoolwide projects authorized under current law. Effective Schools practices might be listed as among the kinds of activities a school could undertake as part of its schoolwide project. Also, schools implementing schoolwide Chapter 1 projects might be mandated to utilize the Effective Schools research as a basis for improving the educational program they offer. (H.R. 950, introduced in the 100th Congress, proposes that a school may be designated for a schoolwide project if its required plan describes how the school "will move to implement an Effective School program.") In implementing a program based on the Effective Schools research a school typically forms a team of teachers, administrators, and, in some instances parents and students (especially at the secondary level). The team then compares current school practices with those identified in the research, identifies areas needing improvement, and develops, implements and evaluates an improvement plan. To produce meaningful and lasting change in school operations and effectiveness, such projects need to be supported for three to five years. Schools need to be able to obtain technical assistance on a periodic but regular basis. The cost of such a program would generally be in the range of $10,000 per school year per school.

DEVELOPMENT OF NEW KNOWLEDGE ABOUT EFFECTIVE PRACTICES

Over the next few years, schools will confront new problems that current research findings will not address in very satisfying ways. Over time, state policies initiatives together with demographic and economic forces are likely to produce significant changes in the nature of the teacher workforce, the structure of schools and of the teaching profession, the regulatory environment in which schools operate, the nature of the students they serve, and the skill and knowledge demands society will place on their students.

In the face of these changes, the value of what we currently know is likely to decline considerably. For example, knowledge about effective classroom management practices derived from studies of traditional classrooms with 30 children will not be very helpful to teachers in "restructured" schools, where the definition of classrooms may be quite different from the contemporary model. It is even less valuable in schools where class size has been reduced to 15–20, because even at that point the nature of management tasks and problems begin to change

Similarly, our knowledge about the instructional leadership practices employed by principals will not be adequate for schools with several "lead" or "master" teachers working under a principal with an MBA, and no previous teaching experience. Rather, we will need much better information about how new leadership configurations—of administrators and teachers together—can best organize themselves to provide necessary school leadership.

These are not simple academic problems. They reflect the fact that schools are changing, and that the definition of the most effective practices is necessarily time-bound. As schools change, new practices and organizational arrangements will be invented and tried out, some with more success than others. One role of research is to bring evidence and analysis to bear on the task of sorting out which of the new approaches works best.

Congress has an important role to play in ensuring that there is a steady supply of new information and knowledge to meet the growing needs of educators and policymakers. It can carry out its role in several ways.

First, *Congress can substantially increase funding for educational research.* Funding for research has never been high, and has declined since 1980. Yet despite limited investments, the payoffs are beginning to be substantial. And one by-product of the recent reform era has been heightened attention to research by educators and policymakers alike. One of the most important ways Congress can contribute to the momentum of education reform is to provide sufficient resources for a broad range of research, development and dissemination activities. This will ensure that continuing attempts to improve education can rely on up-to-date knowledge regarding best practices and the means to implement them.

The need for regularly updating research on effective schooling practices has another important implication for Congress. Because research findings are time-bound, *Congess should be careful not to inflexibly codify existing research findings into legislation.* Rather, Congress should seek alternative ways of defining what is meant by Effective Schools research. Such means could include relying on existing shared understandings in the education community regarding the meaning of the term; relying on the Education Department and/or on an independent group of educators and scholars to periodically prepare a current definition and summary of the research; or requiring recipients of funds for Effective Schools projects to define the research for themselves and show how proposed projects activities draw upon the research base. Any one of these alternatives can serve to balance the need for a clear definition of Congressional intent with the simultaneous need to keep re-

search-based programs responsive to advances in the knowledge base.

Second, *Congress can improve the information base for educational policymakers at the local, state and national levels through the proposed redesign of elementary and secondary statistics collected by OERI and the proposed expansion of the National Assessment of Educational Progress.* Taken together, those two improvements in national education statistics contain proposals to monitor the extent to which schools employ the Effective Schools practices on a nationwide and state-by-state basis, and relate these practices to student achievement. This data will enable policymakers to target programs, resources and new policy initiatives on those school practices which most need to be strengthened. In addition, these same data provide a valuable tool for giving visibility to, and concentrating public and educator's attention on, important school practices.

SUSTAINING THE MOMENTUM OF REFORM THROUGH THE APPLICATION OF RESEARCH

Congress can play an important leadership role in sustaining the current reform movement and in speeding the development and implementation of a second wave of reforms as well. This can be accomplished through two initiatives.

First, *Congress should challenge the states to develop and strengthen initiatives which incorporate the Effective Schools research.* Congress should provide resources for use by state boards of education and state education agencies to strengthen effective schooling practices at the school building level, in ways that are tailored to the particular reform initiatives in each state. As indicated in the previous section, there is already a good deal of related activity at the state level, ranging from state sponsored school leadership academies, Effective Schools technical assistance programs, staff development efforts for teachers, career ladder programs, school accreditation standards, and the like. One way for Congress to effectively build on these efforts would be to provide resources for state designed efforts which show clear links to the Effective Schools research, and which are directly targeted on enhancing educational practices at the school building level.

State proposals should describe the particular activity or initiative, indicate the level of state resources committed to the effort, and show how Federal resources will expand or strengthen the program. Congress should permit a wide range of activities, including the development and start-up of new programs, expanding existing programs to additional sites of participants, or the evaluation of existing efforts.

Second, *Congress should provide funds to support local experimentation and demonstration sites aimed at providing models of restructured schools.* These efforts should result in models of dramatically new organizational arrangements for creating Effective Schools by strengthening opportunities and capacity for school site management and decision-making. They should involve the recommendations proposed by the Carnegie Forum and the National Governors' Association, and should include such elements as in-

creased responsibility and decisionmaking for teachers, increased staff support for teachers, greater differentiation in roles and responsibilities for teachers, more varied school leadership structures, greater autonomy at the school site level for budgeting and resource allocation, and greater accountability for teachers and schools in terms of student performance.

Of necessity, such efforts will involve changes in the regulatory and support efforts for demonstration schools at both the state and local school district level. *Therefore, such efforts must involve partnerships between individual school buildings, local school boards and the district central office, and the state board of education and state education agency.* Federal support for such efforts should therefore be contingent upon the contribution of both local and state resources, and upon the demonstrated willingness of state and local governing bodies to provide waivers to regulations as needed, and to develop and implement new accountability mechanisms based upon outcomes and goals reached by the school, including student performance.

To be effective, such demonstration sites will require concentrated resources over a minimum of five years. Resources should be available to support increased operating costs in the short term (with the provision that state and local revenues will support them in the long run), to underwrite development and technical assistance efforts, to document and describe the change process and efforts, to evaluate the results of the effort, and to disseminate new models and the lessons learned from them nationally.

Further, to ensure the effectiveness of this effort, funds should be distributed to a small number of sites (e.g., 5–10) on a competitive basis. This will ensure an adequate concentration of resources targeted on those sites with the greatest promise for success.

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The Role of the District in School Effectiveness

(By Thomas B. Corcoran, Education Consultant, Pennington, N.J.)

Introduction

The Effective Schools research has directed the attention of policymakers to the policies, practices, and conditions that seem to contribute most to educational success in individual public schools. Unfortunately, the "theory" or model of school effectiveness that has emerged from this research gives little consideration to the roles that the school district and district policymakers play in creating Effective Schools. This omission is largely an artifact of the research designs used in studies of Effective Schools. As a result, much of the recent literature on school improvement treats schools as the significant units of change and school improvement is discussed in terms of "school by school" strategies. Yet, public schools operate within the context of school districts whose boards set their policy and direction and whose central office staffs implement and monitor those policies. While there is little research describing the impact that school boards and district administrators have on school effectiveness, experience and common sense suggest that these actors play important roles in shaping the character, and the effectiveness, of the public schools within their jurisdictions. The purpose of this paper is to review what is known, and what can be inferred, about the influence of school district policies and practices on school effectiveness and to suggest some general guidelines for the assessment of district policy and practice.

The Effective Schools Research

Research has demonstrated that some public schools provide more effective instruction to their students than other schools serving similar populations. This research, based largely on studies of urban elementary schools, has stimulated both the development of new theory in education and a reform movement seeking greater social equity in educational attainment through application of the research findings. The most popular summary of this research, the so-called Five Factor Theory, identifies strong building leadership, clear instructional goals, an orderly school climate, high staff expectations and standards for student performance, and frequent monitoring and assessment of student progress as the essential characteristics of Effective Schools (Edmonds, 1979; The Effective School Report, November, 1986). More comprehensive reviews of the literature suggest more complex models. For example, Purkey and Smith (1983) identified thirteen distinct factors related to school effectiveness.

Effective Schools are described as being different from schools in general. They are more tightly managed. Their curriculums, in-

structional practices, and tests are more closely aligned and the work of their staffs is directed toward agreed-upon goals. Such schools, researchers contend, are able to reduce the effects of socioeconomic background on academic achievement. They are "strong" schools that have policies and practices that reduce the influence of social environment and peer culture on student behavior and academic performance. Consequently, they are able to make greater academic and behavioral demands on their students. Staff in these schools set higher expectations for their students and place greater emphasis on the recognition of high performace. They make better use of their resources, especially time, and they reach out to attain parent and community support. Internally, such schools are characterized by a strong sense of community, consensus on goals, and a professional culture that supports success. Comparisons of such schools with more typical schools suggest that the factors identified by researchers account for a significant portion of the variation in achievement among schools. Comprehensive reviews of this literature have been conducted by Purkey and Smith (1983), MacKenzie (1983), Rutter (1983), and Corcoran and Hansen (1983).

The research on Effective Schools frequently has been criticized for methodological and conceptual weaknesses (MacKenzie, 1983; Rowan, Bossert, and Dwyer, 1983). It is important to note that most of the studies have focused on urban elementary schools serving low-income children, and that the "findings" are merely correlations between school characteristics and student performance on basic skills tests. It also is significant that the criteria of effectiveness generally have been limited to student performance on standardized tests of basic skills. Other educational outcomes have seldom been examined although it is generally assumed that the Effective School factors also would contribute positively to their attainment. In spite of these and other limitations, however, those who have reviewed the studies have concluded that the findings are important and are robust enough to provide the basis for the design of school improvment programs and the evaluation of schools.

There are some good reasons for the general optimism about this body of research. First, dozens of independent studies have produced similar findings. Second, these findings are consistent with the results from studies of effective teaching. There are also striking parallels between these findings and analyzes of conditions in highly successful businesses (Clark, Lotto, and Astuto, 1984). Moreover, much of the research on implementation of school improvement and workplace reform has reached conclusions similar to those drawn from the Effective Schools studies (Corcoran and Hansen, 1983; Purkey and Smith, 1983). Finally, and perhaps most importantly, the findings make common sense to practitioners who accept their validity (Corcoran, 1985). In sum, there are powerful and persuasive arguments for using the research on effective schools as the basis for public policy in education.

Implications for District Policy and Practice

Research on the characteristics of effective classrooms and effective schools is considerably more extensive than studies of school

board performance and school district operations. Yet, leadership and support from local educational leaders and central office personnel are crucial to stimulating and sustaining school and classroom improvement. This conclusion comes from studies of school improvement (Berman, 1984; Crandall, Loucks, and Eisenman, 1983; Louis, Rosenblum, and Molitor, 1981) and from experience in working with schools. It is also supported by a recent review of programs based on the Effective Schools research which found that most of the programs had been initiated by school district staff (Miles and Kaufman, 1985).

Yet school effectiveness "theory" gives little consideration to the role of district leaders in the change process and generally is associated with a "grass-roots" school-by-school approach to improvement. This view is a logical derivative of the hypothesis that school culture, which varies from school to school, is the dominant factor in determining effectiveness. In most cases, researchers have focused on school variables and ignored the interaction with the school district. School autonomy has been assumed in the research designs and then often championed in the conclusions. Districts are expected to play supportive roles but the real action (and initiative) is perceived to rest at the school level (Marsh and Berman, 1984).

This perspective is simply out of touch with the realities of school governance and operations. The school may be the proper unit of analysis for research, but schools are not operationally independent of school systems and building leaders seldom initiate significant changes without district approval and support. Schools function within a nested hierarchy of federal, state, and local policy. The policies and operations of local districts, in particular, have a profound influence on school effectiveness and the possibilities for improvement. Furthermore, during the past three decades there has been a steady drift of authority away from the school building to the district office as a result of collective bargaining and federal and state regulations (Eberts and Stone, 1984; Johnson, 1984; Talbert, 1981). It is probably more accurate to think of schools as being co-managed by district and building administrators, although that the balance of power and authority in this partnership varies enormously from district to district (Cuban, 1984; Yin, Blank, and White, 1984). The question of the proper balance between school autonomy and district control or initiative cannot be prescribed in the abstract. It depends upon the local political context, the influence and agendas of various actors and interest groups, and, ultimately, on the decisions of local policymakers about the desired mix of central control and delegation.

Even in situations in which some form of school-site management prevails, districts typically exercise enormous influence on school and classroom effectiveness:

—by determining the composition of the student body;
—by defining the criteria for student success or failure with promotion standards, attendance requirements, and local graduation requirements;
—by determining the quantity, quality, and fit of instructional materials;
—through patterns of resource and time allocations;

—by the degree of decentralization of decisionmaking (districts vary in the amount of authority they give to principals and the degree of latitude given teachers with curriculum);
—through staff selection and assignments;
—by setting the tone for the organization and shaping the expectations and work norms of their staff; and
—through collective bargaining and contract enforcement (Corcoran, 1985).

District policies and procedures also have been shown to have significant effects on the development and success of school improvement programs. For example:

—districts are typically the initiators of broad-based improvement efforts;
—districts often determine which schools participate—for example, David and Peterson (1984) found that while the policy of the California School Improvement Program called for schools to volunteer, in practice, districts selected the volunteers;
—districts may determine the implementation strategy—whether it be top-down, bottom-up, or a combination of the two (Berman and McLaughlin, 1979; Smith and Purkey, 1985);
—the attitude of district leadership may influence school staffs' view of an improvement effort as a fundamental change, a project, a source of funds, or more paperwork (Marsh and Berman, 1984; David and Peterson, 1984)—commitment on the part of leadership is critical to successful change (Fullan, 1982; Cuban, 1984);
—the ability of the board and superintendent to work together may determine whether any improvement programs are initiated, whether they are supported adequately, how they are evaluated, and whether they are continued (Buttram, Corcoran, and Hansen, 1986; Institute for Educational Leadership, 1986);
—districts provide resources—almost all improvement programs involve costs, especially staff time, that require district approval (Cuban, 1984; Rowan, 1983);
—districts are in the best position to provide schools with assistance because district staff are familiar with individual schools and are able to spend time working there (Crandall, Loucks, and Eisenman, 1983)—the districts are more likely than other agencies to have a pool of people to play this role (David and Peterson, 1984);
—districts can often provide important incentives and for staff efforts and recognition for their accomplishments (Smith and Purkey, 1985); and
—districts may be able to provide relief from policies, routines, or contractual provisos that limit or obstruct improvement efforts (Smith and Purkey, 1985).

Even this brief review makes it blatantly clear that district leaders—the board of education, the superintendent, and the central office staff—play critical roles in shaping the outcomes of school improvement initiatives. They are in the best position to initiate action (or to obstruct it); they have the opportunity to plan and coordinate; they control critical resources; and, ultimately, they decide whether the effort was a success or failure and if it should

be expanded, continued, or put on the shelf with other well intended plans.

School Districts and Collective Bargaining

One of the most important ways in which district leaders influence school effectiveness is through the content and the tone of collective bargaining. Bargaining takes place at the district level and the management position is represented by district leaders rather than by building administrators. The agreements that emerge set critical parameters for policy and practice in individual schools. For example, teachers covered by collective bargaining agreements tend to receive higher salaries, teach smaller classes, spend less time instructing students, and more time in preparation than teachers working in non-union situations (Eberts and Stone, 1984). Bargaining also has significant effects on the management of schools by increasing the formal authority of teachers, reducing the discretionary authority of principals, centralizing policymaking responsibilities, and placing restrictions on the work demands that can be made of teaching staff. Some contracts also include provisions that limit class size, restrict staff transfers, provide procedures for planning staff development programs, and create mechanisms for teacher involvement in school and district planning and decision-making. All of these factors can influence school effectiveness. Whether the net impact of collective bargaining on school effectiveness is positive or negative can only be determined on a case by case basis.

Although the limited evidence that is available suggests that collective bargaining has a small positive effect in general on student achievement (Eberts and Stone, 1984), the actual situation could vary considerably from district to district. If labor relations in a district are characterized by conflict and confrontation, it may be difficult to sustain the high levels of cooperation essential to school effectiveness. If the district or the union leadership enforces the contract in a manner that causes either principals or union representatives to adopt a "work to rule" attitude and become bureaucratic, it may be difficult to create or sustain the kind of school "ethos" associated with school effectiveness. Flexibility is reduced, teachers define their responsibilities and commitments more narrowly, communications are hampered, and the quality of education is likely to suffer. These problems are most likely to arise when the district leadership refuses to accept the legitimacy of the union or persistently acts in an autocratic, top-down manner. There is an old adage that management gets the unions that it deserves which seems to apply to school districts as well as it does to other types of organizations.

Conversely, cooperation between management and labor in a school district may make it easier to implement school improvement programs. Finn (1985) has argued that collaboration between management and labor is essential to successful school reform. He contends that there is a revolution underway in labor-management relations in the private sector based on the premises that an organization functions best when everyone in it has an investment in its goals, subscribes to its central values, takes part in decisions af-

fecting their work, shares responsibility for success or failure, and can assume that the organization has an authentic interest in their welfare. Other commentators have noted the high degree of congruence between the descriptions of management practices in successful private firms and the findings of the Effective Schools research (Clark, Lotto, and Astuto, 1984).

In sum, collective bargaining has a significant impact on local educational policy and it may have considerable effect on school effectiveness. The impact of collective bargaining is likely to vary greatly across districts because of differences in the content of contracts, the degree of contract compliance, and the climate of labor-management relations.

District Applications of the School Effectiveness Research

Districts all over the country have designed or adopted "effective schools" programs. Typically, these programs are intended to raise test scores and include elements such as:

—definition of instructional goals;
—new promotion and/or graduation requirements;
—changes in time allocations for instruction;
—mandated planning for each school;
—alignment of the curriculum taught and texts and materials with the test being administered;
—revision of supervisory practices to align them with district goals;
—creation of a district assessment program to monitor student progress; and
—staff development focusing on effective schools and teaching, supervision, assessment, and planning (Cuban, 1984).

The general intent of these programs is increased control over instruction and tighter coupling between the classroom and the district. The underlying assumption often appears to be that the teaching staff are not doing the job and that tighter prescriptions and closer supervision are needed to raise their level of effort, keep them on track, and improve coordination. This search for tighter coupling often results in improvement programs being designed in the district office with little, if any, teacher input, and being implemented in a top-down fashion. As one observer has noted:

> From images popular in the academic journals of schools as loosely linked, amorphous enterprises with plenty of slack, a counterimage now emerges from such districts of organizations tightly coupled in both goals and formal structure, targeted sharply on academic productivity. District officials pursuing policies that fasten individual schools snugly to the central office believe they have found just the right hammer to pound in a nail (Cuban, 1984).

Considering the pressure on district leaders to raise test scores, such policies are understandable, particularly if local policymakers believe that such approaches will produce quick gains in achievement and hold off public criticism. Such such gains may be short-lived and the unanticipated consequences costly. The top-down, tighter-coupling approach to Effective Schools may simply produce increased bureaucratization and a higher level of mediocrity. Increased uniformity combined with stricter controls over teacher work may lower morale, level of effort, and professionalism among the teaching staff. Dependency on basic skills tests may narrow the

curriculum and reduce the time devoted to other important curriculum content. Stronger accountability measures without compensating steps to enhance teacher discretion and participation may raise the levels of conflict among teachers and administrators and lead to a "work to rule" attitude. The press toward efficiency is not necessarily bad, it may even be essential in some districts, but it is unlikely to create the conditions essential for long-term improvements in school effectiveness unless accompanied by other measures that build and protect strong, professional cultures in the schools.

Most analysts interpret the Effective Schools literature differently from the version described above. The central message, they would contend, is that good schools have a culture that promotes and supports goal consensus, cooperation, achievement orientation, problem-solving, and high discretionary effort. In this view, people and the resources that people bring to their jobs are a good school's major assets. Good school managers it is argued are those who create conditions under which people perform at their best.

From this perspective, the role of the district shifts from control to the encouragement, nurturing, and development of the desired work cultures in schools and to the recruitment and development of the talent to take full advantage of the opportunites for improvement that are created. This suggests an inversion of the conventional approach to implementation of improvements. Emphasis is placed on maximizing school level responsibility rather than on gaining greater control and ensuring uniformity of practice. School staff are asked to identify and clarify school problems, develop and implement plans, make decisions about assignment of resources, and plan staff development activities.

The district's role in this approach is to provide direction and resources, including moral support, incentives for participation, time, funds, and technical assistance. The district, of course, continues to set the parameters within which school-based improvement occurs by setting overall goals, defining indicators of quality, reviewing plans, and monitoring implementation. District leaders retain the responsibility for school outcomes and cannot abdicate that responsibility. They are the ones who have both the authority and the responsibility to create the school conditions under which optimal effectiveness can be attained. The issue facing district leaders is how to best create those conditions.

What Should District Policymakers Do?

Faced with conflicting advice about how to improve their schools, what should district leaders do? In the face of public demands for better student performance, choosing not to act is not an option. The answer to the dilemna facing district leaders about how to design an appropriate strategy for improvement depends on the local political context, the quality of school personnel, the character of management-labor relations, and the expectations of the district and community. Beyond that, research does provide some guidelines for action. A review of the research suggests that there are eight key functions districts must perform if school improvement is to have any real chance of success at the building level.

—District leaders must determine which decisions and functions belong to central administration and which decisions and tasks can be properly carried out at the building level. This is what Peters and Waterman (1983), in their bestseller on successful corporations, refer to as simultaneous loose-tight properties. District leaders must determine which values are so important that they must be tightly monitored and controlled and which can be delegated or left to discretion at the building level.

—District leaders must set and communicate clear goals. They must ask what the system is about and what it should be about. Goals should be stated in a manner that permits verification of their attainment.

—District leaders must address the question of what should be taught and set up a process for making such decisions. Whether curriculum is defined centrally, in each school, or, in some cases, in the classroom, there must be a process to validate those decisions and ensure that they are actually put into practice.

—District leaders should define the indicators used to assess school quality and change. Developing and managing this information system is probably a central office function. Information should include outcome data and indicators of those school conditions believed to be related to high performance.

—District leaders should develop policies that encourage staff to identify and solve problems, work cooperatively, and make the maximum effort to achieve goals. The district must foster a climate in which people can be productive, cooperative, and willing to face up to problems. Trust is essential if people are to accept responsibility for improvement.

—District leaders should foster policies that provide incentives for initiative and improvement. They should emphasize that improvement is a collective responsibility and hold themselves and central offices accountable for carrying out their responsibilities.

—District leaders should ensure that the allocation of money, people, and time reflects district goals and priorities. The district must provide funds, technical assistance, and staff development to support improvements. The district leaders should also insure that their policies in selecting, assigning, and promoting staff are consistent with their goals.

—Finally, the district leaders must take a long-term view of improvement by setting reasonable timelines and providing for continuity of development. They also must provide stable leadership to guide the improvement effort and buffer it from hasty evaluations or external interference. This can be difficult given the rapid turnover rate of board members and superintendents.

These are the major inferences to be drawn from the research on school effectiveness and school improvement for school districts. Although they raise more questions than they suggest answers, they do define an agenda for a district administration and board who wish to have their effectiveness judged by the effectiveness of the schools for which they are responsible.

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Administrative and Organization Arrangements and Considerations in the Effective Schools Movement

(By Eugene E. Eubanks, Daniel U. Levine, University of Missouri-Kansas City)

There are hundreds of points that can and should be made regarding administrative and organizational arrangements and considerations to strengthen the Effective Schools movement for improving the education of economically disadvantaged students. (We will limit our analysis to the economically disadvantaged segment of students, particularly those attending predominantly proverty schools in big cities.) However, due to severe space limitations, we can summarize only a few of the most important of these points. We will do this under the following headings: *resources; organizational arrangements and grouping; testing; secondary schools preparation of administrators; and planning for improvement.*

Resources

Experience, common sense, and some research support the conclusion that significant additional resources generally are required to substantially improve the achievement of students attending poverty schools in big cities. Among the major categories in which expenditure increases generally are required are the following: class size, supervisory and technical assistance personnel; instructional materials and supplies; and specialized personnel such as librarians and counselors.

CLASS SIZE

Whether class size reduction results in improved achievement has been a long and tortuous controversy among educational researchers. Without recapitulating the history of this controversy, we can report that there is now some consensus for the conclusion that substantial changes which reduce class size below the fifteen-to-twenty range can improve achievement provided that such reductions are taken advantage of to modify and improve instructional practice. Beyond this common sense conclusion, several recent studies support the emerging and interrelated conclusions that the number of low-achieving students may be more important than the number of students per se, and that classes with a relatively high proportion of low achievers must be small if the average teacher is to function effectively in this difficult environment (see Levine, Levine, and Eubanks, 1985).

SUPERVISORY AND TECHNICAL ASSISTANCE PERSONNEL

Substantially improving the achievement of vast numbers of disadvantaged students obviously will require major changes in instructional methods and materials. This in turn means that teach-

ers at poverty schools must learn to function much more effectively than the average teacher has in the past, or has been prepared to do through his or her pre-service and in-service education.

Fortunately, the good news today is that improved instructional approaches have been developed that can result in large achievement gains among previously low-achievers, particularly as regards their performance on higher-order skills such as comprehension in reading or other subjects and problem-solving in math. Professor David Pearson of the University of Illinois Center on Reading has characterized these recent advances in knowledge and technique as a "comprehension revolution" which has occurred during the past ten years.

Unfortunately, the "downside" of this development is that teachers need considerable technical assistance and other forms of help if they are to use improved instructional approaches effectively. As summarized by MacGinitie and MacGinitie (1986), the situation today is basically that "There is essentially nothing in instructional materials or in teacher training [of the past] that helps the teacher learn what to do when the child does not understand" (p. 258).

Bruce Joyce, Beverly Showers, and others have shown that acquisition of new teaching skills and approaches requires many hours of demonstration, coaching, and practice, facilitated by highly trained specialists who provide support at the classroom level. Significant resources for staff development personnel, training materials, stipends, and other related expenditures typically are needed if teachers are to become much more effective in working with disadvantaged students. In addition, teachers must be provided with much more planning time than they usually have if they are to effectively implement contemporary approaches such as mastery learning or other versions of outcomes-based instruction (Levine, 1985).

INSTRUCTIONAL MATERIALS AND SUPPLIES

For a variety of reasons, significant additional expenditures for instructional materials and supplies usually are needed in working to improve achievement of low achievers. One reason is because many students must learn at a faster rate than they have in the past, and this in turn requires a wider-than-normal range of materials selected in accordance with students' changing levels of performance and their individual interests and learning problems. In addition, effective utilization of new or different instructional approaches frequently requires additional resources such as textbooks, computers, and consumable materials.

SPECIALIZED PERSONNEL

The need for additional specialized personnel is clearly evident at most poverty schools in big cities. For example, elementary librarians are needed to help ensure that regular classroom lessons are extended to and coordinated with independent learning and appropriate reinforcement in the library, sufficient counselors are required to help students cope with the special problems they encounter in an inner city environment, home-school coordinators

often are required to ensure positive coordination of home and school influences, and other specialized personnel may be needed to help plan and conduct field trips, learning incentive programs, or other activities designed to motivate students and enrich their learning. In general, relatively large numbers of specialized personnel such as administrators, librarians, and counselors are needed at poverty schools, compared with middle-class or economically-diverse schools, because faculty (including teachers) at schools with a high proportion of disadvantaged students are overloaded with a much higher-than-normal incidence of problems they encounter in working to discharge their responsibilities.

It is true that substantially increasing expenditures at poverty schools does not and will not automatically result in improvements in instruction or student performance. Resources can be increased far beyond the average level in a school district, but little or no improvement will take place unless they are used to bring about fundamental changes in instructional methods, organizational arrangements, and other aspects of education mentioned elsewhere in this paper. Indeed, this is just what happened at many poverty schools in the 1960's and 1970's, where large expenditures were used to reduce class size, provide more specialists, or introduce expensive instructional systems that did not result in basic improvements in instructional and organizational arrangements. Misuse of increased resources in the past, however, does not obviate the importance of additional resources required to implement change more effectively in the future.

It is also true that there are some poverty schools which already have an adequate level of resources and are much more dependent on changes in their utilization rather than additional increases if improvement is to occur in achievement. Some New York City schools, for example, have relatively large resources available through various local, state, and Federal sources, and may not require additional money to bring about substantial improvement. In our experience, however, such schools are much more the exception than the rule nationally. Most poverty schools we have visited or know about require significant additional resources for expenditures such as those identified elsewhere in this paper.

We are embarrassed about and perhaps should apologize for devoting so much of our limited space to advancing the (to us) obvious conclusion that most poverty schools need additional resources to improve achievement. However, claims that poverty schools require little or nothing in additional resources are sufficiently widespread—sometimes from people who should know better—that we felt obligated to emphasize this fundamental point.

Organizational Arrangements and Grouping

During the past fifteen years we have devoted a considerable amount of time to studying, visiting, and otherwise learning about effective poverty schools at which average reading or math achievement is much higher than other similar schools. One of the most important characteristics which distinguishes those successful poverty schools is that they have unusually effective arrangements for teaching low-achieving students.

In some cases, such arrangements emphasize provisions of additional assistance to improve reading performance through tutoring before school, during lunch, or after school, utilization of teachers' aides, reductions of non-essential time in art, music, or other subjects, formation of smaller-in-class groups for low achievers than for other students, and other means (Sizemore, 1985). This type of approach requires that most or all teachers be unusually flexible, skilled, and hard-working in instructing low achievers.

In other cases, arrangements at unusually effective poverty schools emphasize placement of the lowest achievers in relatively homogeneous classes organized and taught so as to accelerate their learning. In essence, this involves placing the lowest achieving students in the smallest classes with outstanding teachers and support staff who emphasize characteristics, such as relatively rapid pacing of instruction and stress on improving students' self-concept as a learner, that have been identified as important in working successfully with groups of low-achievers (Leinhardt and Pallay, 1982). One potential advantage of homogeneous grouping of the lowest achieving students is that it can make the job of most teachers throughout the school much more manageable.

In still other cases, improved performance by the lowest achievers has been attained through their placement in heterogeneous classes which emphasize individualized and small-group instruction. This approach can be successful as long as average class size in a school is relatively low, teachers have sufficient materials, skill, time, and help to provide meaningful individualization, and instructional procedures incorporate additional assistance for low achievers through team learning or other means. Overall, this approach probably has the most potential for helping all students increase substantially in achievement, but it is relatively expensive and it often fails because inadequate resources are provided to make it workable (Lindelow, 1983). Elizabeth Cohen (1986) has summarized some of the problems educators have encountered trying to deliver instruction emphasizing individualization in heterogeneous classrooms as follows:

> This change. . . . meant that teachers were going to need support in solving problems with the uncertain technology, support in learning how to work with aides. Because no one gave the teachers the help they needed, these innovations often degenerated. . . . (p. 158).

Our discussion in this section raises the old question of whether homogeneous or heterogeneous grouping is superior. We have seen both arrangements as well as several intermediate mixtures succeed in poverty schools, which leads us to conclude that, from some points of view, how well grouping is carried out may well be more important than whether it is homogeneous or heterogeneous.

In general, we believe that it is best to avoid or minimize homogeneous grouping to the extent possible, particularly in racially and socioeconomically mixed settings where such grouping may generate segregation within or across classrooms. However, in many poverty schools strictly heterogeneous organization may not be feasible, and some amount of homogeneous grouping may be more workable, provided that appropriate special assistance is available to the lowest achievers. In the latter situation, we agree with a recent review of research in which Robert Slavin identified

the following "general principles for making ability grouping an effective practice at the elementary level: Students should remain in heterogeneous classes at most times, and be regrouped by ability only in subjects in which reducing heterogeneity is particularly important (for example, math and reading) * * * Grouping plans must reassess student placements frequently and allow for easy reassignments based on student progress" (Slavin, 1986:4). Unfortunately the general principles advocated by Slavin are rarely followed systematically in practice.

Beyond these principles, we believe that some new terminology is desirable for partially circumventing the frequently emotional controversy between those who support and those who oppose homogeneous grouping. The best language we have heard for this purpose involves the concept of "levelling," which advocates making a broad distinction between readers and non-readers, or, sometimes, between good readers, poor readers, and non-readers. Once this distinction is made, special assistance must be provided for poor readers and non-readers. A similar distinction probably should be made between students who are above and below some level of minimally adequate functioning in mathematics.

One particularly critical aspect of organizational arrangements for improving achievement at poverty schools in big cities involves coordination of the regular instructional program with compensatory resources such as Chapter 1. The model approach for providing compensatory education is to "pull" students from regular classes for special assistance, but many or most pullout arrangements unfortunately are not working effectively because they are poorly coordinated with regular instruction, reduce accountability of regular teachers, create confusion and disruptive movement throughout the school day, and otherwise detract from effective delivery of instruction. New York, Kansas City, and some other urban districts have made large improvements by reducing or eliminating pullout, and many other districts must either emulate their example or find ways to implement pullout more effectively, if academic achievement is to be substantially improved at urban schools.

Testing

Administrators also are responsible for initiating and implementing testing and evaluation policies and practices that will guide the effective schools movement in productive directions. Improvements in testing and evaluation are particularly required in order to counteract destructive tendencies toward overemphasis on low-level, rote learning at poverty schools in big cities.

Achievement patterns in many big cities indicate that much emphasis is being placed on improving students' performance in "basic" rudimentary skills that are easiest to teach and test. In addition, such skills are easiest for students to learn and not only help keep them "occupied" with worksheets and workbooks but also tend to bolster their sense that they are accomplishing something in school. It is difficult for teachers and students to resist this tendency, particularly since emphasis on higher-order skills calls for more active learning methods that are particularly hard to implement in sizable classes with a high proportion of low achievers.

Data on achievement trends in big cities support the conclusion that much progress is being made in teaching low-level skills, but deficiencies in higher-order skills are still severe (Levine and Eubanks, 1987). In Milwaukee, for example, the average fifth-grade capitalization and math computation scores are at the 55th percentile nationally, the average spelling score is at the 57th percentile, and the average punctuation score is at the 59th percentile. However, the average math problem-solving score is at the 47th percentile, and the average reading comprehension score is at the 40th percentile.

In Kansas City, Missouri, similarly, average sixth-grade achievement at predominantly-black elementary schools in the inner city is at the national average of 6.8 (grade-equivalent) in the mechanics of language (spelling, punctuation, capitalization), but is at 6.1—far below the national average—in reading comprehension. Students who have been drilled for years in lower-order reading and math skills now perform fairly well on standardized tests through the sixth or seventh grade, but many can only "call-out" the words without understanding what they read, or do simple arithmetic operations without being able to understand math concepts or problem-solving methods required for success later in school or in a modern economy.

Worse, testing practices frequently reinforce destructive tendencies to overemphasize lower-order skills. State or district tests in some locations specify a large number of sub-skills that are supposed to constitute "reading", but instruction in these sub-skills frequently only helps students select the correct multiple-choice response on a test but not actually read with understanding (MacGinitie and MacGinitie, 1986; Harris and Cooper, 1985). When such tests are imposed as the standard for performance across a diverse set of schools, students in middle-class schools generally perform well and move quickly to instruction in more important higher-level skills, while students at poverty schools in the inner city get mired in a repetitive cycle marked by learning, forgetting, and relearning of narrow sub-skills.

Testing can be an engine for improvement rather than a generator and reinforcer of destructive emphasis on lower-order skills in the inner city. Among the viable options available to administrators, policymakers, and other school officials are to emphasize components of standardized tests that deal with the relatively most important higher-order skills, or to use tests, such as the Degrees of Reading Power, that are designed explicitly to assess performance on dimensions other than rote mastery of narrow sub-skills. It will be unnecessarily difficult to wean teachers and students from emphasis on rote learning so long as performance is assessed on the wrong criteria.

Secondary Schools

At the senior high and intermediate (i.e., junior high or middle school) levels, the conclusions set forth above regarding resources and organizational arrangements also apply, but problems in reforming secondary schools are more severe than those encountered at the elementary level, and therefore workable solutions require

even greater change in traditional practice. Some of the conclusions we have reached regarding successful reform of secondary schools with a high proportion of low-achieving, disadvantaged students are enumerated below.

(1) Urban secondary schools enrolling many low achievers require fundamental structural change. Productive structural change can include such possibilities as creation of "school-within-a-school" units, establishment of "Institutes" or "Centers" that allow students to concentrate on studies in which they are particularly interested, and arrangements for teaching across subject areas to emphasize common themes in English, social studies, math, science, and other subjects.

(2) In nearly all urban secondary schools with which we are familiar, some change is required in the composition of the faculty, in order to introduce more teachers who are both able and willing to work with low-achieving urban students.

(3) To carry out major improvements in structure, staffing, and instructional approach, secondary schools generally require at least one support person for every nine or ten teachers. (This generalization holds for socioeconomically-mixed as well as poverty schools.) Support staff can include a variety of positions such as administrator, supervisor, counselor, sub-unit director, program director or coordinator, specialist in curriculum and/or instruction, staff development specialist, and technology specialist. Successful organizations in business and industry, health care, military services, and other fields typically have one support person/supervisor/technical consultant for every eight-to-ten employees. It is hard to understand why people believe that schools, which have increasingly complex and difficult objectives to carry out, can function effectively with a much smaller amount of leadership and supervision.

We admit that our comments and recommendations regarding reform of secondary education are at variance with the initiatives now being implemented for this purpose in many locations. Recently summarized by Sedlak, et al. as involving mostly a variety of efforts to "tighten administrative and instructional controls" without providing for fundamental improvement in the organization and operation of high schools, these so called reforms essentially involve "relatively inexpensive" changes in supervision, testing, and management. We agree with the assessement of Sedlak and his colleagues when they conclude that these initiatives usually "give the appearance of solving the problems without disturbing the schools" significantly (pp. 180-181).

Preparation of Administrators

Recognition of the importance of principals and other administrators in creating more effective schools is almost universal. In addition, there seems to be growing recognition that the task of bringing about real improvement in elementary and secondary schools is enormously difficult. Interesting debates can be carried on concerning the extent to which other faculty can or most provide leadership in addition to or in place of the principal, differentials in the possibilities for providing leadership between the elementary and the secondary levels, the appropriate administrative

sequence for emphasizing school climate, instruction, and evaluation, and other related matters. Nevertheless, nearly everyone agrees that outstanding administrators are required if instruction is to become significantly more effective, and that the general level of leadership must be much improved in the future.

Given these truisms, pre-service and in-service preparation of administrators must be substantially strengthened or the Effective Schools movement probably will thrash around without having a systematic national impact. Serious efforts to improve administrative leadership necessarily will include the following interrelated components:

—paid internships at both the pre-service and in-service stages. In addition, the supervisor of interns should not have more than nine or ten interns assigned to him or her at any one time.

—opportunities to gain first-hand familiarity with instructional arrangements, operational procedures, climate improvement efforts, and othr aspects of education at unusually effective schools. Such familiarity with effective practices can be obtained through a combination of internships, mentor programs for new or potential administrators, collegial study arrangements through which administrators visit and analyze each other's schools, and other means.

Administrator preparation activities such as those described above are relatively expensive in comparison with the usual in-service and pre-service activities now provided. Thus one may doubt whether serious efforts on a widespread basis will be launched to adequately improve the capabilities of public school administrators, even though training programs of the magnitude indicated are standard in many businesses and professional positions outside education.

Emphasis on administrator preparation is particularly critical at this stage of the Effective School movement due to growing recognition of and stress on the importance of organizational culture in improving achievement at concentrated poverty schools. Research increasingly indicates that the norms and attitudes shared by faculty are a key consideration in determining whether meaningful change will occur and become institutionalized. Innovations in instructional technology and curriculum without concomitant and supportive change in organizational culture will not produce significant and lasting improvement. Successful change involves much more than simply developing or obtaining capable staff.

At the same time, relatively little "academic" knowledge is available concerning how and what one does to change organiational culture in practice, and strictly academic knowledge of this kind does not in any case necessarily affect the behavior or those who learn it. We do know, however, that improvement in organizational culture is one of the key contributions made by administrators in unusually Effective Schools, and that successful administrators are able to do this because they have developed successful "theories-in-use" that "fit" the particular circumstances at a given school. Administrators at unusually Effective Schools, in other words, have somehow learned how to "make sense" of the myriad of problems and opportunities that exist in their schools; through continuous

"strategic dialogues," they communicate a vision of improvement sufficiently powerful to change faculty motivation and organizational culture (Taylor, 1984, 1986).

In our opinion the best and surest way to help principals and other administrators learn to develop and implement appropriate theories-in-use bearing on organizational culture and other key aspects of the change process is through internships and mentoring arrangements such as those described above.

Planning for Improvement

Successful implementation of systematic efforts to improve achievement at poverty schools depends on improvement in site-level planning to deliver instruction more effectively. General guidelines should be utilized to help schools and districts avoid some of the mistakes that have been common in various Effective Schools projects throughout the United States. Several guidelines to serve this purpose are provided below. (The guidelines are adapted from Levine and Leibert, 1987).

1. Do not overload schools, or allow them to overload themselves as part of a public relations attempt to "demonstrate" that they are doing everything possible to improve achievement.

In addition to limiting the number of objectives and components in a school plan, central office personnel should help school faculties select relatively simple approaches for improving instruction. For example, it is known that students differ somewhat in preferred learning style, and school plans frequently specify that instruction will be reformed to take account of learning differences. If the approach specified is relatively simple and manageable, such as emphasizing an alternative mode of instruction for corrective instruction, most teachers probably can proceed to make instruction somewhat more effective for many students. If the solution selected is complicated, such as design and re-design of learning environments with reference to 20, 30, or even 100 or more types of learning preferences, the result probably will be still another innovation which is carried out only on paper.

2. Require that school personnel deal with strategic instructional issues as part of their plans for improvement.

One implication of our preceding discussion is that planning guidelines and formats should be formulated with reference to key instructional issues such as grouping of students. If, for example, a school plan specifies that improvements will be made in reading performance on standardized tests, the plan should provide information showing that problems and alternatives regarding grouping were considered in the context of reading instruction. Evidence also should be presented showing that reading skills and activities have been carefully selected and scheduled at the grade and classroom level to avoid page-by-page emphasis on low-order skills.

3. Assistance from the central office must be furnished primarily through technical support from persons, not forms to fill out and deadlines to meet on paper.

Resolution of difficult problems involving delivery of instruction cannot be achieved through filling out forms describing components in an annual school plan, no matter how elaborate. To ad-

dress these issues successfully, schools need many kinds of technical assistance from persons who can help them develop agreements regarding priorities for change, identify obstacles to change in practice, and work out solutions to complex problems within their particular school context.

We admit that it is much cheaper and easier for central administrators to collect and process reams of paper designated as "annual improvement plans" than it is to provide intensive and useful technical assistance. We have seen too many instances, however, in which assistance primarily took the form of processing paper to believe that this approach can make much difference.

4. To the extent possible, plans as well as planning directives and formats should focus attention on the most common pitfalls in implementing a particular approach to improving instruction.

This guideline is implicit in our previous recommendation that the central office should require schools to deal explicitly with problems they encounter in grouping of students and other key instructional issues. Other pitfalls such as mental and physical overload of teachers also should be addressed.

Many districts now specify one or another mastery learning approach to improve instruction at the elementary level. Research as well as the experience of many educators indicate that there are predictable pitfalls that frequently detract from the success of these approaches. Anderson and Jones (1981), have identified some of these common flaws as follows: (1) lack of priorities among instructional objectives: (2) failure to organize objectives into well-sequenced units; (3) failure to orient and schedule students and instruction properly; (4) over-testing; and (5) unjustifiable decisions about performance standards. If planning does not help schools deal effectively with these problems, mastery learning tends to reinforce negative tendencies toward slow pacing of instruction emphasizing low-order learning.

At a broader level, common pitfalls in mastery learning include neglect of students' interest and enjoyment in learning, failure to coordinate mastery learning with other instructional approaches, failure to provide teachers with sufficient planning time and, equally pernicious, assigning teachers so many low-achieving students that teachers cannot give them enough learning time and teacher support. At this level of analysis, much of the problem in implementing mastery learning involves making it *manageable* and *feasible* for teachers—a consideration that should be explicitly addressed in formulating and carrying out individual school plans.

5. Modify some of the language of the effective schools literature to reflect key instructional and organizational issues as part of the planning process.

Although most of the school effectiveness studies have been correlational and hence severely limited in indicating specific actions to improve achievement, this research has helped identify some of the important manipulable characteristics and variables (Good and Brophy, 1986). To make this literature even more useful as a guide for school planning, we believe that some of these characteristics should be re-defined to focus partly on resolution of key instructional and organizational issues. For example, the characteristic which Edmonds (1982, p. 4) described as "the principal's leadership

and attention to the quality of instruction" might be re-written as "The principal provides leadership in identifying and implementing solutions to central instructional issues such as pacing and grouping."

Similarly, the characteristic most commonly referred to as "high expectations" and described in more detail by Edmonds (1982, p. 4) as "teacher behaviors that convey the expectation that all students are expected" to attain "at least minimum mastery" might be re-written as "assistance is provided and instructional arrangements and practices are structured so that all students are expected and required to meet minimum performance levels." In our experience, discussing teacher "expectations" often leads to a fruitless debate on whether teachers believe their students can learn. Improved terminology could help direct attention to questions such as how to provide assistance for slow learners through altering instructional arrangements, how to communicate high expectations through requirements for completion of classroom tasks, and how to implement rigorous yet realistic promotions policies.

Conclusion

Although the conclusions reached and the issues considered in this paper necessarily touch on curriculum and teaching, they are first and foremost the province and responsibility of school administrators. Organizational arrangements at the school level, policies and practices regarding school structure and staffing, and utilization and availability of resources are determined to a significant degree by administrators at various levels ranging from the school site to the central office.

Whenever or wherever adequate resources are not available to carry out fundamental reform of instruction, acquisition of additional resources must be the primary priority for administrators and policymakers at all levels. Wherever or whenever adequate resources are available or become available, administrators are responsible for revising organizational arrangements to ensure their effective use, though such revisions may well create conflict and opposition from some faculty members, teacher organizations, or other sources. What administrators must particularly avoid and oppose are the schemes being advanced by state government officials and legislators, local boards of education, bureaucrats, and other who in the absence of needed fundamental changes are proposing to improve achievement by simply "tightening up" on standards or testing the minimal competence of disadvantaged students for whom improved performance depends on availability of adequate resources together with fundamental changes and improvements in the ways they currently are used.

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Programs of School Improvement: An Overview

Universities, state agencies, and school districts have established school improvement programs based on effective schools research.

Photo: Charles Steed

RONALD R. EDMONDS

Educators have become increasingly convinced that the characteristics of schools are important determinants of academic achievement. Since 1978 an extraordinary number and variety of school improvement programs have concentrated on a school effects interpretation of the relationship between achievement and family background. Such programs represent a major educational reform and derive from a fairly rapid educator acceptance of the research of Brookover and Lezotte (1977), Edmonds (1979), Rutter (1979), and a number of others who have studied characteristics of both effective and ineffective schools.

Several school effects researchers have independently concluded that effective schools share certain essential characteristics. However, two important caveats exist: researchers do not yet know whether those characteristics are the causes of instructional effectiveness; nor have the characteristics been ranked. We must thus conclude that to advance school effectiveness, a school must implement all of the characteristics at once.

The characteristics of an effective school are (1) the principal's leadership and attention to the quality of instruction; (2) a pervasive and broadly understood instructional focus; (3) an orderly, safe climate conducive to teaching and learning; (4) teacher behaviors that convey the expectation that all students are expected to obtain at least minimum mastery; and (5) the use of measures of pupil achievement as the basis for program evaluation.

To be effective a school need not bring all students to identical levels of mastery, but it must bring an equal percentage of its highest and lowest social classes to minimum mastery. This measure of school effectiveness serves two broad purposes. First, it permits the middle class to establish the standard of proportionate mastery against which to judge a school's effectiveness. Second, it permits schools to

This article was prepared under contract to the National Institute of Education for presentation at a conference on "The Implications of Research for Practice," held at Airlie House, Virginia, February 1982.

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be easily characterized as improving or declining as the proportion of the lowest social class demonstrating mastery rises or falls.

Three types of school improvement programs have resulted from the school effectiveness research: (1) programs that are organized and administered within schools and school districts; (2) programs that are administered by state education agencies, which provide incentives and technical assistance to local schools and districts; and (3) programs of research, development, and technical assistance usually located in a university. The university programs tend to emphasize the dissemination of knowledge gained from research on school and teacher effects as well as description and analysis of the technology of school intervention.

Local District Programs

There are now more than a score of urban school districts at various stages of the design and implementation of school improvement programs based on the characteristics of school effectiveness. Five such programs—in New York City, Milwaukee, Chicago, New Ha-

"Clearly, change must be schoolwide and include both principals and teachers."

ven, and St. Louis—all attempt to introduce approaches to leadership, climate, focus, expectations, and assessment that conform to characteristics of school effectiveness. These programs are dissimilar in that their designs for change are different. Some of them invite schools to voluntarily participate while others require participation. Some were initiated by school officials while others were initiated by outsiders.

The New York City School Improvement Project (SIP) is the most widely publicized of these efforts. Between August 1978 and February 1981, I was chief instructional officer of the New York City Public Schools. I therefore presided over the design and implementation of SIP, which was part of a larger attempt to improve the school system's basic approach to teaching and learning. Since 1978 there have been changes in the New York City schools in such basic areas as curriculum requirements and the minimum standards for pupil promotion.

SIP was and is the most generously funded of the five projects described here. The project began in October 1979 with nearly a million dollars of support provided by the Ford Foundation, the Carnegie Corporation, the New York Foundation, the New York State Department of Education, and the New York City Public Schools.

During the 1978–79 school year about 15 persons were recruited and trained as school liaisons. The training covered the research on school effects, the use of instruments to evaluate the schools, and procedures the staff were to follow when consulting with individual schools. Initially each participating school was assigned a full-time liaison; by 1980–81 each liaison was assigned two schools. All of the participating schools were volunteers.

"Thus no local school design should depend on changes over which the local school does not have control."

A committee of principals, teachers, and parents was then formed to participate in and approve all project activities in the school. Using interviews and classroom observations, the liaison conducted a "needs assessment" of the school in order to determine the principal's style of leadership, the instructional focus of the school, the climate, the nature of teacher expectations of pupil performance, and the role of standardized measures of pupil performance in program evaluation. On the basis of the needs assessment, a plan was developed by the liaison and the school's committee to introduce the effective school characteristics where they were absent and to strengthen them where they were weak. Descriptions of supportive educational services were developed inside the school district and in greater New York City. These descriptions were used by the liaison to decide which services were required by the school improvement plan.

In New York City, typical interventions included teaching principals the elements of instructional leadership; seminars to improve teachers' use of achievement data as a basis for program evaluation; and developing and disseminating written descriptions of the school's major focus.

The New York City School Improvement Project is annually evaluated on measures of organization, institutional change, and measures of pupil performance on standardized tests of achievement. The Ford Foundation conceived of and funded a "documentation unit" to evaluate the outcomes of the project and to record its evolution. The achievement data for each school have shown an annual increase in students demonstrating academic mastery.

The school improvement project in Milwaukee is also based on school effectiveness research, but is substantially different from the New York City project. During the 1979–80 school year, 18 elementary schools—regarded at the time as the least effective in the Milwaukee school district—were assigned by the superintendent to participate in this project.

The Milwaukee project was primarily designed and implemented by Maureen Larkin and relied solely on school district resources. It initially focused on teacher attitudes toward the educability of the schools' predominantly low-income students.[1]

The St. Louis project was initiated from outside the school district. During the 1980–81 school year, John Ervin, Vice President of the Danforth Foundation, persuaded St. Louis school officials to permit several inner-city schools to participate in a project designed to introduce the characteristics of effective schools. From the beginning, Ervin and area superintendent Rufus Young used

"This much is certain: significant numbers of educational decision makers have concluded that the findings from research on effective schools are accurate and efficacious."

a design focused on broad participation and shared decision making. With Danforth support, teachers and principals were chosen to visit New York City's SIP and a Pontiac, Michigan, improvement project based on the Brookover-Lezotte characteristics of school effectiveness. From these visits, St. Louis educators gained personal knowledge of effective schools.

The 1980–81 school year was spent in intense planning with the assistance of area university faculty who illustrated the processes of change and the behaviors associated with school effectiveness. Area superintendent Young has reported achievement gains for all participating schools.

The New Haven, Connecticut, project focuses on all schools within the district and is directly supervised by the superintendent. New Haven is especially interesting because of its long association with Jim Comer of Yale. Comer's *School Power* (1980) describes a ten-year history of direct intervention in three predominantly black New Haven elementary schools. Comer's approach to school improvement emphasizes the mental health skills of educators and seeks a qualitative improvement in the interaction between teachers and students, school and family, adults and children. The New Haven schools in which Comer has worked have dramatically improved both interpersonal relations and the quality of teaching and learning. Superintendent Jerry Tirozzi has set out to build on Comer's model in an overall approach that derives from my correlates of effectiveness (Edmonds, 1979).

My major differences with Comer focus on tactics and outcomes. Comer's approach is grounded in the disciplines of psychology and psychiatry in that he teaches the psychological origin of pupil behavior in order to improve the quality of educator response. This orientation has required many educators to learn new skills. Comer's program not only raises achievement but has a desirable effect on the affective outcomes of schooling. My approach is somewhat more modest in that the goal is increased achievement and the measure of gain is exclusively cognitive. The attempt to integrate these two approaches has not been under way long enough to permit evaluation.

The Chicago project represents yet another alternative design. During the 1980–81 school year, Dean Robert Green of Michigan State University's Urban Affairs Program was hired by the Chicago Board of Education to preside over the design of a desegregation plan for the Chicago schools. Green is a national authority on desegregation designs, especially as they relate to pupil placement, equitable rules governing

student behavior, supplementary services, and the myriad elements that contribute to effective desegregation.

I was hired by the Chicago Board of Education to design the portion of the desegregation plan that would directly affect teaching and learning. This division of labor produced two distinct plans (Green, 1981) which were submitted to the Chicago board in the spring of 1981. Green's plan focused on pupil placement to desegregate the schools. My plan was intended to standardize the curriculum, emphasize achievement in evaluation, and otherwise cause the system to implement what is known about school effectiveness.

The school board rejected Green's plan for pupil placement and only recently submitted to the federal court a plan for voluntary desegregation. My plan, however, was adopted, submitted to the federal court, and ordered into effect in September 1981. That was an unfortunate development. Had the board adopted both plans, it would have advanced desegregation and achievement simultaneously. Its failure to do so, however, implies that programs of school improvement can substitute for pupil placement plans for desegregation. Improved achievement for black students is unrelated to the legal, moral, and ethical obligation to eliminate discrimination as a characteristic of pupil placement.

Superintendent Ruth Love didn't arrive in Chicago till after both plans had been submitted to the board. It is therefore reasonable to expect that Love will interpret the court order in ways that reflect her formidable mastery of the various elements that advance achievement in a large urban school system.

The school improvement programs thus far discussed are but a few of many now under way. Our experience with implementation gives no basis for preferring any particular design. We know far more about the characteristics of school effectiveness than we do about how they become effective. Nevertheless, it is possible to make summary observations of potential use to all programs of school improvement.

Clearly, change must be schoolwide and include both principals and teachers. All programs of school improvement should be evaluated on at least two distinctive measures. Changes in student achievement are an obvious important measure. Of equal importance are observable changes in the institutional, organizational nature of a school as a function of changes in principal and teacher behavior. Formative evaluation is distinctly preferred over summative evaluation. Finally, while most changes will occur within the school, some important and desirable changes can only be made by the school board or the superintendent. Local school designs for improvement will from time to time reveal aspects of board policy or administrative rules that impede the plan. It is important at such times to continue the local school plan while acknowledging that districtwide changes may not occur or may take a long time to accomplish. Thus no local school design should depend on changes over which the local school does not have control.

Photo: Robert Zimmer

State-Administered Programs

A number of state departments of education are circulating materials designed to encourage local school districts to adopt school improvement plans based on school effectiveness research. For example, the Missouri Department of Education has produced a film now circulating throughout the state; and the Ohio Department of Education, in addition to dissemination activities, is offering modest financial support to Ohio school districts willing to pursue school effectiveness programs.

The most formal state program is the Office of School Improvement of the Connecticut Department of Education. During the 1979–80 school year, department staff spent substantial time in New York City observing the SIP training program and liaison behavior in project schools. Connecticut was especially interested in the instruments that had been developed to evaluate the correlates within the schools. The Connecticut Office of School Improvement now offers two services to local school districts.

First, districts are invited to submit designs for school improvement based on the characteristics of effective schools. Some of those designs are funded with grants from the state. Second, whether funded or not, all Connecticut school districts may request technical assistance from the Office of School Improvement. For example, any district may ask state personnel to use the evaluative instruments to conduct a needs assessment in a local school. State personnel also teach officials of the local district how to use the instruments. As a result, a number of Connecticut districts have designed and implemented programs of school improvement based on the characteristics of effective schools. The preliminary reports are enthusiastic although no formal evalua-

tions have yet been produced.

The New Jersey Education Association (NJEA) offers an interesting variation on these state programs. Officials of the state office of the NJEA were also sent to New York to observe SIP, and in 1980–81 NJEA launched its own Effectiveness Training Program. Local chapters of the NJEA may request assistance from the state office to design and implement a program of school improvement. The state office then sends to the local chapter a team of trainers to conduct needs assessments and staff development activities designed to encourage the development of local plans. Unfortunately, none of these state activities has produced evaluative materials that permit assessment.

University-Based Programs

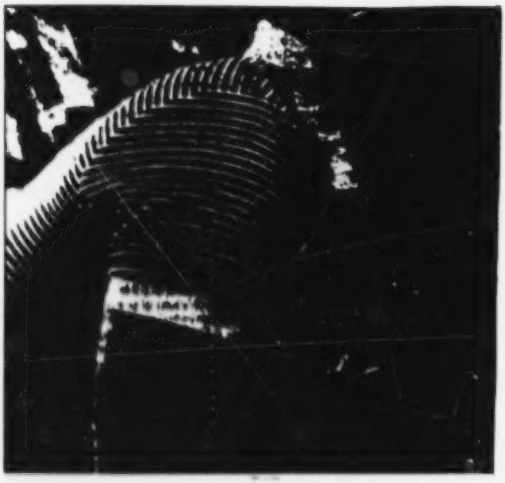
The Title IV Kent State University desegregation assistance center is a program that combines dissemination and technical assistance.

In cooperation with the Ohio Department of Education, Kent State has held statewide improvement conferences and is working with a number of Ohio districts in the design and implementation of local plans for school improvement based on the school effectiveness research. Kent State has interpreted the school effectiveness research as complementary to and supportive of local plans for desegregation. The Kent State Desegregation Center graphically illustrates that regardless of the particular plan for desegregation, all schools profit by exploiting what is known of the characteristics of effective schools.

A similar program is now under way at the University of Michigan's Program of Equal Opportunity (PEO), which is also a Title IV desegregation assistance center. PEO's dissemination materials explicitly note the complementary nature of school effects research and teacher effects research (*BreakThrough*, 1982).

Finally, there is Michigan State University's NIE-funded Institute for Research on Teaching, which is part of MSU's College of Education. Some faculty of the Institute study the correlates of effective teaching while others focus on the correlates of effective schools.

The College of Education has formed a unit called the Center for School Improvement whose purpose is to synthesize and disseminate the knowledge gained from research on effective schools and effective teaching. During the 1981–82 school year, Michigan school districts were invited to participate in a training program focused on the implications of this knowledge for practice. More than 100 principals, teachers, and central administrators from Michigan's 21 largest school districts are now designing local programs of school improvement to be implemented in one or more of the schools in their district. The demand for training programs based on research on effective schools and effective teaching illustrates widespread educator interest in knowledge-based designs for school improvement.



These brief descriptions of local, state, and university programs of school improvement are typical of the range and variety of such programs and activities, although they do share certain similarities.

Common Characteristics of Improvement Programs

In all of these improvement programs the local school is the unit of analysis and the focus of intervention. All of these programs presume that almost all school-age children are educable and that their educability derives from the nature of the schools to which they are sent. While all of these programs would advocate increased financial support for schools, their designs focus on more efficient use of existing resources. Finally, all of these programs use increased achievement for low-income children as the measure of gain while presuming that such gains will accrue to the even greater benefit of middle-class children. These shared characteristics form an interesting basis for judging the long-range prospects of the programs. I strongly urge all programs of school improvement to provide the basis for their systematic evaluation.

It is equally important to suggest advances in educational research that would benefit these projects. More basic research on school effectiveness would reinforce the correlates of school effectiveness and further advance our knowledge of effective schools. Among the fundamental research issues yet to be studied is whether the correlates of school effectiveness are also the causes of school effectiveness. Basing improvement programs on the causes of school effectiveness would dramatically increase achievement rates.

Research on school effectiveness has been complemented and reinforced by

Photo: Steve Ruhe

"While all of these programs would advocate increased financial support for schools, their designs focus on more efficient use of existing resources."

research on teacher effectiveness. Brophy (1974), Good (1979), and Rosenshine (1978), for example, have focused on the teacher behaviors and classroom characteristics that describe instructionally effective classrooms. Teacher effects analysis of the interaction between pupil achievement and pupil family background parallels school effects analysis in that both focus on aspects of the school to explain why some schools succeed with greater proportions of their pupil populations than do others.

The major findings from research on schools and research on classrooms should be integrated. From a conceptual point of view both groups of researchers emphasize behaviors within the school as the major determinants of achievement in basic school skills. Both groups of researchers depend on the discovery of effective practice in contrast to invention of recommended practice theorized to improve achievement. Furthermore the correlates of effective schools and effective classrooms derive exclusively from the environment over which local schools have control.

These two sets of research findings also complement each other and would be strengthened were they integrated. For example, one of the correlates of effective schools is the principal's instructional leadership. One of the manifestations of instructional leadership is frequent principal-teacher discourse focused on diagnosing and solving instructional problems in the classroom. Principals who have intimate knowledge of the most effective techniques of classroom management and instruction are well prepared for discussions with teachers focused on the classroom. It is probably safe to say that as schools acquire the characteristics of effective schools, they create a school climate more receptive to teacher use of the correlates of effective teaching.

Finally, only a few of the programs of school improvement reflect the findings from research on organizational change. The disparity of designs for local school improvement exists partly because of their different analyses of the means by which organizational change might occur. As we record the progress of these projects, it would be well to note the extent to which their successes and failures derive from the presence or absence of the principles of organizational development.

This much is certain: significant numbers of educational decision makers have concluded that the findings from research on effective schools are accurate and efficacious. We are thus observing the proliferation of programs of school improvement based on a common body of knowledge. This intimate interaction between research and practice validates the usefulness of research on schools and classrooms and encourages an expanded agenda of educational inquiry □

The details of the Milwaukee program appear in this issue in an article written by Larkin, "Milwaukee's Project RISE," pp. 16–21.

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Resource Information Service

STEWART C. PURKEY AND MARSHALL S. SMITH

Too Soon to Cheer? Synthesis of Research on Effective Schools

Educational Leadership 40 (December 1982): 64-69. Reproduced with permission of the Association for Supervision and Curriculum Development. Copyright (c) 1982 by the Association for Supervision and Curriculum Development. All rights reserved.

The recent literature on school effectiveness concludes that differences among schools do affect students' academic achievement. This literature challenges previous research that had found unequal academic achievement to be primarily a function of family background and related variables (Coleman and others, 1966; Jencks and others, 1972). Easily measured differences among schools—class size, teacher salaries, number of books in the library, the reading series, the age of the school building, or whether or not the school had a compensatory education program—were found to bear little relationship to achievement (Averch and others, 1972; Coleman and others, 1966; Jencks and others, 1972; Stephens, 1967; Hanushek, 1981; Mullin and Summers, 1981; Murnane, 1980).

Studies on the determinants of achievement have been concerned with variables relating to (1) how schools and school districts are structured and make decisions, (2) the process of change in schools and school districts, and (3) the way in which classrooms and schools can increase the amount of time spent on productive instruction. Although these variables are less susceptible to mechanical changes in policy, they are alterable (Bloom, 1981)—generally with difficulty, but often for little money.

Our attention in this article is directed to the literature on school-level factors. Following Barr and Dreeban (1981), we view school systems as "nested layers" in which each organizational level sets the context and defines the boundaries for the layer below (though there is a reciprocal influence). If the locus of the educational process is at the lowest structural level, the classroom, it is nevertheless the adjacent layer, the school, which forms the immediate environment in which the classroom functions. The quality of the process at the classroom level is enhanced or diminished by the quality of activity at the level above it.

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Review of the School Effectiveness Literature

We have clustered the studies that have received the most attention in the school effectiveness literature into four groups—outlier studies, case studies, program evaluation studies, and "other" studies. The lack of empirical data in many of the studies precluded us from carrying out a quantitative synthesis. Following the review of studies we examine the growing literature on the implementation of change in schools and recent research on theories of organization in order to gain an understanding of academically effective schools.

Outlier Studies. One major strategy of school effectiveness research has been to statistically determine highly effective schools (positive outliers) and unusually ineffective schools (negative outliers). Most such studies employ regression analyses of school mean achievement scores, controlling student body socioeconomic factors. Based on the regression equation, an "expected" mean achievement score is calculated for each school. This "expected" score is subtracted from the actual achievement level of the school to give a "residual" score for each school. The researcher then selects the most positive and the most negative residual scores and labels the schools they represent as unusually effective or ineffective. Characteristics of these two types of schools are then assessed by surveys or case studies to determine the reason for the outcomes.

Studies that have adopted this general approach include three carried out by the New York State Department of Education (1974a, 1974b, 1976); a study conducted for the Maryland State Department of Education (Austin, 1978); Lezotte, Edmonds, and Ratner's study of model cities elementary schools in Detroit (1974); Brookover and Schneider's (1975) study of Michigan elementary schools; and the study of Delaware schools by Spartz and others (1977).

The similarity among these studies is striking in two areas: the means of school identification (four used regression analysis to identify outliers) and the selection of only elementary schools as study sites. Quality and conclusions, however, vary considerably. For example, the first New York study (1974a) found that methods of reading instruction varied greatly between high and low performing schools. A follow-up study (1974b) found the opposite—the method of reading instruction did not appear to make any difference. A third New York study (1976) again found salient differences in classroom instruction, although it did not highlight the same instructional features as the first study. The Maryland study (Austin, 1978) concluded that effective schools are characterized by strong instructional leadership, while Spartz and others (1977) found that effective schools had principals who emphasized administrative activities. The Spartz study identified at least seven general variables relating to achievement. Brookover and Schneider's Michigan study (1975) found six. Moreover, Brookover and Schneider did not mention ability grouping, while the Delaware and two of the New York studies considered this a significant feature. Finally, although

it is cited by many in support of various lists of critical factors, we could find no discussion of the substantive findings of the Lezotte (1974) study of Detroit's model cities schools.

While the studies do correspond in several respects, the variations in their findings should serve as a caution to those who would reduce such disparate literature to five or six variables. Similarly, those variations suggest that no variable in particular is crucial. Nonetheless there is some consistency in the results. The more pervasive common elements are better control or discipline and high staff expectations for student achievement. Each of these variables showed up in four of the seven studies for which there are data. An emphasis on instructional leadership by the principal or another important staff members was found to be important in three studies.

Although outlier studies vary in quality, they commonly suffer from the following weaknesses.

1. *Narrow and relatively small samples used for intensive study.* Though they often sift through a fairly large population, researchers who used a statistical procedure followed by a case study approach had a final sample ranging from 2 to 12 schools. The small sample sizes suggest that the characteristics that appear to discriminate between high and low outliers are chance events. The lack of representativeness of the samples also raises issues about their generalizability. On the basis of these studies alone we might make tentative claims about what constitutes an effective lower grade reading program in an urban elementary school with a predominantly low-income and minority student population. The evidence will not take us beyond that with any certainty.

2. *Error in identification of outlier schools.* The strength of the outlier approach depends on the quality of the measures used to distinguish the effects of social class and home background. If these measures are weak or inappropriate, differences in school characteristics between high and low outliers will be confounded with student background differences. Two of the studies—the New York State study (1976) comparing 148 "positive" schools with 145 "negative" schools and the Maryland study (Austin, 1978)—suffer from this problem to such an extent as to render their conclusions meaningless.

3. *Inappropriate comparisons.* In a brief note Klitgaard and Hall (1974) recommended comparing positive outliers with average schools rather than with negative outliers. We were struck by the tendency of outlier researchers to ignore this good advice. The important differences between effective schools and average schools may be very different from the differences between "ineffective" and "effective" schools. Unless schools are capable of making quantum leaps in effectiveness, it will probably not greatly profit a very poor school to compare itself to an exceptionally fine school. None of the studies addresses this issue.

Case Studies. We carefully studied five school case studies cited in various school effectiveness reviews (Brookover and others, 1979; Brookover and Lezotte, 1979; Rutter and others, 1979; Venezky and Winfield, 1979; Weber, 1971) and three recent additions to the literature (California State Department of Education, 1980; Glenn, 1981; Levine and Stark, 1981).

Six case studies in this group looked at urban elementary schools. The studies varied in quality of methodology and clarity of reporting. Taken together they looked closely at a sum total of 43 schools, an average of a little over seven schools per study. The inherent weaknesses of the case study approach and the small samples seem a frail reed upon which to base a movement of school improvement. Yet the commonality of findings among the case studies and their similarity to other kinds of studies increase their credibility.

Five factors stand out as a common to most, but not all, of the six case studies. These are (1) strong leadership by the principal or another staff member, (2) high expectations by staff for student achievement, (3) a clear set of goals and emphasis for the school, (4) a school-wide effective staff training program, and (5) a system for the monitoring of student progress. An emphasis on order and discipline showed up in two of the studies, and a large number of factors were specific to a single study.

The authors of the other two case studies took a more complex look at the nature of effective schools than did the previous six. Brookover and others (1979) observed two matched pairs of elementary schools. One school in each pair was high-scoring, the other low-scoring. The researchers theorized that student achievement was strongly affected by the school social system, which varied from school to school even within similar subsamples with SES and racial composition controlled.

The school social system was said to be composed of three interrelated variables: (1) social inputs (student body composition and other personnel inputs), (2) social structure (such as school size, open or closed classrooms, and so forth), and (3) social climate (school culture as the norms, expectations, and feelings about the school held by staff and students). While school social inputs affect academic achievement, they are "modified in the processes of interaction" with the school social structure and school social climate (p. 14).

An effective school was described as one "characterized by high evaluations of students, high expectations, high norms of achievement, with the appropriate patterns of reinforcement and instruction," in which students "acquire a sense of control over their environment and overcome the feelings of futility which characterize the students in many schools" (p. 24).

The study by Rutter and others (1979) stands out in four respects: it was a longitudinal study carried out from 1970–1974; it examined secondary schools; it looked at 12 inner-city schools in London; and it attempted to measure school outcomes in terms of students' in-school behavior, attendance, examination success, and delinquency. The general argument is that secondary schools vary in outcome in the four areas above, that these variations are associated with the characteristics of schools as "social institutions," and that it is a school's "ethos" that influences students as a group. School ethos includes the "style and quality" of school life, patterns of student and teacher behavior, how students are treated as a group, the management of groups of students within the school, and the care and maintenance of buildings and grounds.

A troubling aspect of this study, however, is that the more effective schools had higher percentages of middle-income students than did the less effective

"School governance was found to be of critical importance in creating safe schools."

schools. If academic achievement, attendance, and delinquency are strongly linked to social class integration, then the possibility exists that the significant difference between schools is not in school processes but in school composition. This problem is magnified by the fact that only two of Rutter's 12 schools can be considered to be academically effective.

Program Evaluations. A third category of school effectiveness research is program evaluation. We looked at six evaluations that examined school-level variables: Armor and others (1976), Trisman and others (1976), Doss and Holley (1982), and three studies carried out by the Michigan Department of Education (Hunter, 1979).

Armor and others identified "the school and classroom policies and other factors that have been most successful in raising the reading scores of inner-city children" (p. v) who attended schools participating in the School Preferred Reading Program in the Los Angeles Unified School District. The Trisman study examined reading programs in elementary schools throughout the nation. The researchers surveyed a large number of programs and carefully studied the characteristics of a few schools that had especially successful efforts. Doss and Holley summarized data from an evaluation of Title I programs in Austin, Texas. The three Michigan studies were conducted from 1973-1978 in an attempt to understand what kinds of schools can carry out effective compensatory education programs.

By and large these studies are methodologically stronger than the preceding two types of research. However, their common findings are remarkably consistent with the outlier and case studies. Most schools with effective programs are characterized by (1) high staff expectations and morale, (2) a considerable degree of control by the staff over instructional and training decisions in the school, (3) clear leadership from the principal or other instructional figure, (4) clear goals for the school, and (5) a sense of order in the school.

Other Studies. The comparative study of public and private secondary schools by Coleman and others (1981) makes an interesting contribution to the analysis of effective school characteristics. Their basic contention is that private schools are academically superior to public schools. While the methodology leading to this conclusion is currently the subject of considerable debate, of particular interest are those features of private schools that were hypothesized as accounting for their academic superiority.

On the school level, private schools were more likely to exhibit characteristics that seem to encourage academic performance: better attendance, more homework, more required, rigorous academic subjects, and overall "more extensive academic demands." Private schools were less likely than public schools to possess characteristics thought to harm academic achievement: disruptive behavior (fights, cutting class, threatening teachers, and so on); student perception of discipline as being ineffective and unfair; and student perception of lack of teacher interest in student achievement, behavior, and so forth.

NIE's *Safe School Study* (U.S. Department of Health, Education, and Welfare, 1978) was concerned with identifying the elements that make schools safe, nonviolent, orderly institutions of learning. Though the study did not evaluate the academic effectiveness of schools nor focus on school characteristics that were linked with academic success, many of its findings regarding the difference between safe schools and violent schools are relevant to the discussion of effective schools.

School governance was found to be of critical importance in creating safe schools. The central role in school governance is played by the principal. Those who served as firm disciplinarians, strong behavioral role models (for students and teachers alike), and educational leaders were crucial in making the school safe. Also contributing to school effectiveness is the strong relationship indicated in the study between a school's "structure of order" and academic success. Moreover, "one of the measures associated with the turnaround [of a violent school] seems to have been improving the academic program and stressing the importance of academic excellence" (p. 169). The implications of this study for building academically effective schools are intriguing.

General Critique

Specific criticisms of particular studies and methodologies notwithstanding, and disregarding a number of inconsistencies in findings, there remains an intuitive logic to the results of the research. Flaws in the original research should not discredit the notion of discovering effective school characteristics—seeds for school improvement that can be sown elsewhere. However, blanket acceptance would be dangerous.

For example, there has been no systematic sampling of different types of schools. The existing research tends to concentrate on urban elementary schools with successful reading and/or math programs in the lower grades. Given that, the generalizability of the research is limited. There is also a dearth of longitudinal studies. It is not clear that the reading scores of a third-grade class in an effective school will look the same when that class is in the sixth or eighth grade. Similarly, it seems reasonable and prudent to expect an effective school to have been so historically before raising the banner of success over its doors. Few studies require schools to be consistently effective. Nor

"There are many possible approaches to turning an academically inferior school into a more successful one."

have researchers examined schools that are systematically trying to improve.

Finally, the implicit assumption of many reviews of the literature and the press seems to be that once aware of a set of 5—or 7 or 12—key features, schools can simply decide to adopt them. (The further implication is politically loaded: schools that do not acquire these characteristics lack the will or desire to effectively instruct all their students.) Even if these "easy-to-assemble model" features were necessary for effective schools, they would not be sufficient.

The history of education reform demonstrates that, no matter how well planned, systematic interventions in schools are not always successful either in form or outcome (Berman and McLaughlin, 1977; Elmore, 1978; 1979–80). In fact, current theories of school organization suggest that there are structural and procedural characteristics of schools that militate against this sort of top-down change. For example, if schools are indeed "loosely coupled" systems (Weick, 1976) having weak linkage between administration levels and the relatively autonomous classroom, then notions of effectiveness that depend on strong and dogmatic administrative leadership are immediately handicapped.

Having expressed our reservations about the available research and writing on school effectiveness, we nevertheless find a substantive case emerging from the literature. There is a good deal of common sense to the notion that a school is more likely to have relatively high reading or math scores if the staff agree to emphasize those subjects, are serious and purposeful about the task of teaching, expect students to learn, and create a safe and comfortable environment in which students accurately perceive the school's expectations for academic success and come to share them.

Toward a Theory of School Improvement—The Importance of the Culture of the School

A different approach to school improvement than the recipe model rests on a conception of schools that links content with process to arrive at a notion of school culture (Brookover and others, 1979; Rutter and others, 1979). Content refers to such things as the organizational structure, roles, norms, values and instructional techniques of a school, and the information taught in the curriculum. School process refers to the nature and style of political and social relationships and to the flow of information within the school. It is a school's

Highlights from Research on Effective Schools

Two elements in particular appear to be common to effective schools: high expectations for student achievement on the part of school staff members, and strong instructional leadership on the part of the school principal or another staff member. Other elements that are common to a significant number of effective schools include:

- Well-defined school goals and emphases
- Staff training on a schoolwide basis
- Control by staff over instructional and training decisions
- A sense of order
- A system for monitoring student progress
- Good discipline.

In addition, private schools with high student achievement have good attendance, assign more homework, offer a strong academic program, and emphasize high standards. Schools that are safe for students also stress academic excellence and program improvement, and have strong leadership.

However, schools should not blindly accept or attempt to institute all of the characteristics associated with effective schools. The studies undertaken thus far have not been longitudinal, nor have they concentrated on other than urban elementary schools that already have successful programs. In some schools, structural or procedural factors may simply preclude the successful implementation of certain characteristics.

While one approach to improving achievement is based on a highly structured model that imposes change from higher levels of administration, most successful change results from collaborative efforts that involve schoolwide reforms, the participation of staff members on all levels, and a focus on the overall culture of the individual school.

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culture resulting in a distinct climate composed of attitudes, behaviors, organizational structure, and so on, that is influential in determining the school's effectiveness. An academically effective school would be likely to have clear goals related to student achievement, teachers and parents with high expectations, and a structure designed to maximize opportunities for students to learn.

The appropriateness of the school culture notion is supported by ideas derived from organization theory and from research on the implementation of education innovation. Recent research and theory have rejected a notion of schools as classical bureaucracies, hierarchically structured, susceptible to rational control, and with high responsiveness at the lowest level (the classroom) to the goals set by the administration. A competing and more persuasive description of schools is that they are "loosely coupled systems" in which teachers are largely independent of the principal's immediate supervision (March and Olsen, 1976; Weick, 1976). If schools are indeed loosely coupled, then attempts to increase their effectiveness through imposing discrete policies by fiat are unlikely to bear fruit. Schools by their nature may not prove amenable to command structure approaches, especially given the vested interests of the various groups of relatively autonomous professionals involved in the day-to-day operation of a school. Furthermore, teachers may not agree with the principal (or with each other) on essential variables, and the recipe models say nothing about overcoming or avoiding that resistance.

The school culture model begins to resolve the dilemma posed by loose coupling. It assumes that changing schools requires changing people, their behaviors and attitudes, as well as school organization and norms. It assumes that consensus among the staff of a school is more powerful than overt control, without ignoring the need for leadership.

Studies of implementation efforts reinforce the validity of the school culture perspective and highlight the importance of forging consensus in the process of improving schools. Of particular importance is the fact that change (and presumably maintenance thereafter) will not take place without the support and commitment of teachers who must come to "own" new educational ideology and techniques (McLaughlin, 1978).

Though specific tactics may vary, the general strategy is best characterized as one that promotes collaborative planning, collegial work, and a school atmosphere conducive to experimentation and evaluation (Deal and others, 1977; Hargrove and others, 1981; Hawley, 1978; Little, 1981; McLaughlin, 1978). Miller (1980) suggested it is an approach that sees teachers as part of an entire school organization engaged in development activities that take place over time. Successful change efforts are therefore more likely to be realized when the entire school culture is affected.

The literatures on school organization and on innovation implementation lend strength to the school culture approach to improving academic achievement. Both stress the importance of acknowledging the interplay of factors that compose the school culture and emphasize the need to address all facets of the school when attempting change. Finally, both underline the significance of staff agreement about the norms and goals of the school and suggest ways of forging that consensus in the real world of public education.

Conclusion

We have argued that an academically effective school is distinguished by its culture: a structure, process, and climate of values and norms that channel staff and students in the direction of successful teaching and learning. In that regard we lean in the direction indicated by the research of Rutter and others (1979) and Brookover and others (1979). The lists of effective school characteristics compiled by other researchers and reviewers are also helpful to the extent that they have captured those factors that are likely to have cumulative impact on pupils' achievement.

A cultural approach to school improvement also has the advantage of being equally applicable to elementary and secondary schools. The logic of the cultural model is such that it points to increasing the organizational effectiveness of a school building and is neither grade-level nor curriculum specific. Certainly the greater complexity and size of secondary schools indicate that attempts to change their culture will prove more difficult, and the greater diversity of secondary schools' socially mandated goals further complicates efforts to improve academic effectiveness. However, research by Rutter and others (1979), Coleman and others (1981), Hargrove and others (1981), U.S. Department of Health, Education, and Welfare (1978), and others suggests that the culture of secondary schools *can* be manipulated to promote academic effectiveness. The same research also suggests that schools effective in one area tended to be effective in other areas (a theme often repeated throughout the effective schools research, though supporting data are generally not provided).

There are many possible approaches to turning an academically inferior school into a more successful one. One approach is based on a tightly structured hierarchical model in which change is decreed from the top (the district or at least the principal). Administrative fiat can announce clear goals, organize planning meetings, and institute model evaluation systems. There are other places where such direction may be absolutely critical to upsetting an otherwise firmly established pattern of "ineffective" operation. Our sense, however, is that there are few schools in which mandated changes will be enough to encourage the development of a productive school climate and culture. Most successful school change efforts will be messier and more idiosyncratic than systematic and will need to focus on collaborative, whole-school reform.

In summary, the data indicate that school-level factors can promote learning in the classroom. By studying academically effective schools we can identify characteristics that together create a school culture conducive to student achievement. However, in attempting to build more effective schools we must abandon our reliance on facile solutions and the assumption that fundamental change can be brought about from the top down. Instead, a more promising notion rests on the conception of schools as functioning social systems with distinctive cultures in which the improvement effort is directed toward incremental, long-term cultural change.□

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Successful Teaching Strategies For the Inner-City Child

by Jere Brophy

A large body of research generated in the 1970s provides consistent, encouraging information for all teachers, but especially for teachers of inner-city students. Inner-city students can be taught effectively, says Mr. Brophy. Teachers do make a difference.

The Seventies produced a great deal of progress in research on teaching. Sophisticated research designs and classroom observation systems were developed, and significant funding from such sources as the National Institute of Education and Project Follow Through made it possible to study large numbers of classrooms around the U.S. The outcome has been a consistent set of findings on the elements of effective basic skills instruction, especially for inner-city students.

Teachers and teacher educators should be aware of these research findings for several reasons. First, these findings spring from large-scale classroom research; they do not rely solely on untested theory. Second, the instructional implications of the data are feasible and realistic for teachers with classes of 20 to 40 students; they do not require special facilities or equipment, full-time aides, or other hard-to-come-by resources. Third, the instructional implications are generally applicable, because they have been derived from observations of typical public school teachers and typical students engaged in ordinary school activities.

The research to which I refer includes several large-scale correlational studies, showing that teachers who teach students basic skills effectively differ systematically in their classroom behavior from those who do not.[1] Follow-up experiments have demonstrated that teachers can be trained to use those classroom behaviors that are associated with student learning gains; moreover, students taught by teachers with this kind of training outperform comparable students of teachers without such training.[2] Findings from research of the Seventies do not agree in every respect, but this body of research has given consistent support to certain principles, on which I shall now focus.[3]

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Teachers Make a Difference

Academic achievement in the late Sixties was commonly viewed as a product of intelligence and home background — unrelated to quality of instruction. Teachers were said to have little or no impact on students' achievement, a conclusion that contradicted both common sense and most people's own school experiences. Nonetheless, some people still believe this today.

The research of the Seventies has clearly disproved this notion by establishing that some teachers are reliably more effective than others in producing student learning gains on standardized tests of basic skills, even when students' initial achievement levels are taken into account. Stable individual differences in teacher effectiveness are observable despite changes in class size and composition, group dynamics and other factors unique to certain classes, and teacher health and welfare (which vary from year to year). I shall review here eight teacher characteristics or behaviors that are associated with success in producing student learning gains.

1. *Teacher expectations, role definitions, and sense of efficacy.* A congruent set of expectations and attitudes underlies the specific behaviors of effective teachers. These teachers accept the responsibility for teaching their students. They believe that the students are capable of learning and that they are capable of teaching them successfully. If the curricula, instructional methods, or evaluation devices that they intended to use do not work, they find others that will work.[4] If something is not learned the first time through, they teach it again. In general, these teachers treat student failure as a challenge; they do not write off certain youngsters as unteachable because they lack ability or experiential background. These attitudes are characteristic of effective teachers in any setting, but they are especially vital for teachers working in inner-city schools.

2. *Student opportunity to learn.* Students of effective teachers learn more than other students, in part because they are given more opportunity to learn. Effective teachers allocate most of their available time to instruction, and they organize and manage their classrooms to insure that the time is actually spent in this fashion. Thus the students of effective teachers spend many more hours on academic tasks each year than do students of ineffective teachers. Sometimes the annual difference amounts to several hundred hours.[5] Effective teachers view time as a precious commodity that must be used wisely to achieve learning outcomes.

3. *Classroom management and organization.* Careful allocation of time is not enough; it must be backed by an efficient classroom learning environment and by group management that maximizes student engagement in academic activities. Organization of the classroom environment begins before school starts in the fall with the arrangement of physical space and seating patterns to complement the teacher's instructional objectives and methods.

Once the students arrive, effective teachers take time right away to instruct them on classroom procedures and routines.[6] They show their students what to do, provide practice, and follow through with reminders and periodic review. In the early grades, effective teachers begin the year with detailed instruction on how to make smooth transitions between activities, to sharpen pencils, to obtain equipment, to get help with assignments, and to check their work. Older students usually require less formal instruction on classroom procedures and routines, but they do require a clear understanding of the teacher's expectations and consistent follow through. Effective teachers at all grade levels make sure that their students know what they are supposed to do, understand how to do it, and realize that they will be held accountable for meeting these expectations.

Effective teachers also use effective group management techniques.[7] They plan lessons carefully to provide a smooth, continuous focus for students'

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attention. They accomplish transitions between activities quickly and efficiently. They give students assignments of appropriate difficulty and sufficient variety to maintain their interest. Students know what to do if they need help and what options are available to them if they complete their assignments early.

Effective classroom organization and group management techniques minimize disruption. Students are likely to remain attentive and engaged when their teacher presents appropriate activities, keeps these activities moving at a good pace, and monitors students' responsiveness to them. Careful preparation of the physical environment, early instruction on classroom procedures and routines, and continuous review and maintenance throughout the year lead to a classroom environment that promotes learning.[8]

4. *Curriculum pacing.* To learn efficiently, students must be engaged in meaningful tasks. Variety and a degree of challenge help to motivate learning, but the key variable seems to be the match between students' present achievement levels and the difficulty levels of their assigned tasks. Students learn best when they proceed rapidly but in very small steps. If they are consistently given work that is too difficult, they are likely to give up and become "motivation problems."

This general principle has been well known for some time, but recent research indicates that students require a *very* high success rate in order to progress efficiently. There is disagreement on this point, however. The literature on achievement motivation suggests that a 50% success rate is optimal, at least for youngsters who do not fear failure. This has sometimes been taken — inappropriately — to mean that classroom questions and assignments should be geared to a 50% success rate. Other writers have reached a similar conclusion from their belief that higher-level "thought" questions are more valuable than lower-level "fact" questions or from their belief that learning is likely to be repetitive, boring, or pointless if it is "too easy." On the other hand, advocates of mastery learning usually demand at least an 80% success rate on assignments, and advocates of programmed learning expect the success rate to approach 100%. New research supports this position; findings show that teachers who aim for success rates of 90% to 100% on student assignments produce more learning than teachers who tolerate higher failure rates. The importance of success rate to learning has led one group of researchers to define "academic learning time" as the time students spend engaged in academic tasks with high success rates.[9]

Very high success rates (90% to 100%) are especially important for seatwork assignments, when students are expected to work independently without frequent monitoring by or assistance from the teacher. Somewhat lower success rates can be tolerated in large-group instruction, since the teacher is present to monitor students' responses and provide immediate feedback. Even in this case, a teacher should aim for 70% to 80% correct answers, especially when working with inner-city students.[10]

"[T]eachers who aim for success rates of 90% to 100% on student assignments produce more learning than teachers who tolerate higher failure rates."

Thus the students of effective teachers are exposed to and progress through more material than other students, and the pacing of classroom activities and of progress through the curriculum is generally brisk. But they move along in small steps, and they experience consistent success along the way. This approach is not only effective but probably essential for teaching basic skills to most students, because so much of the curriculum in the early grades is cumulative and students are expected to work independently for much of the time.

5. *Active teaching.* Effective teachers of inner-city students are more than instructional managers who distribute and correct assignments. They actively teach their students in large and small groups — demonstrating skills, explaining concepts, conducting participatory and practice activities, explaining assignments, and reviewing when necessary. If they are first-grade teachers working with reading groups, they introduce new words, point out important phonetic features, and work with students on word analysis and story comprehension.[11] If they are fourth-grade mathematics teachers, they spend time with the class developing key concepts or skills, and they make sure that students understand the assignment thoroughly before they release them to work independently.[12]

Students who receive much of their instruction directly from the teacher generally do better than those who are expected to learn on their own or from one another. To learn independently, students must be able to read, understand, and follow directions. They must be able to identify key concepts and to correct their own errors. Furthermore, they must be willing and able to sustain sufficient levels of concentration and effort. No youngsters in the early grades and probably only a small percentage of older students possess this combination of skills and motivation. Yet the emphasis of the Sixties and early Seventies was on teacher-proof curricula and individualized learning packages that changed the teacher's role from instructional leader to instructional manager. The notion that there was too much "teacher talk" in classrooms and not enough "student talk" compounded the problem. The research of the Seventies suggests that these attempts to change the teacher's traditional role were mistaken.

6. *Teaching to mastery.* Following active instruction in new content, effective teachers provide opportunities for practice and application, monitoring individual students' progress and providing feedback and remedial instruction. Their students consistently experience high success rates because these teachers make sure that new knowledge and skills are mastered to the point of overlearning. Basic skills are taught in hierarchically sequenced strands; thus success at any given level usually requires mastery of skills taught earlier and ability to apply them in new situations. But students typically cannot retain and apply skills unless they have first overlearned them. It is vital to teach to this level of mastery consistently, if consistent success is the goal.

Curriculum theorists and teacher educators often criticize teachers — especially those in inner-city schools — for placing too much emphasis on low-level objectives. The term "low level" implies that such objectives are trivial and easily mastered. Neither claim is true. National and state assessment data regularly reveal that vast numbers of students have failed to master even fundamental objectives in such areas as reading and mathematics. Yet everything we know about learning complex and hierarchically organized skills tells us that higher-level objectives will not be readily comprehended, let alone mastered, until lower-level objectives are not only mastered but overlearned to such a point that they can be combined and applied in the learning of more complex material. Thus it is not surprising that effective teachers spend much of their time asking factual questions and supervising practice of basic skills. There appear to be no shortcuts to efficient performance on higher-level objectives.

7. *Grade-level differences.* I have said that effective instruction in the basic skills involves determination to teach these skills thoroughly, careful allocation of classroom time to this purpose, organization and management of the classroom to involve students in academic activities, programming for brisk curriculum pacing and easy success, active instruction and supervision of students, and teaching to mastery. These principles constitute a general model for instruction in basic

skills, but they require qualification or elaboration when differences in students, subject matter, or other factors are taken into account. Grade level is one such factor.

Students in the early grades require a great deal of one-to-one interaction with the teacher, who provides them with opportunities for overt practice with feedback. For the sake of efficiency, most of this dyadic interaction occurs during small-group instruction. Nevertheless, it is important that the teacher monitor the progress of and interact with each student regularly. In reading groups, for example, teachers who call on students to read or recite in a predetermined order tend to be more effective than teachers who call on students randomly.[13] The ordered method provides structure for students who may need it, and it cuts down on the distractions caused by students who are trying to coax the teacher to call on them. Perhaps more important, this method insures that all students participate regularly and somewhat equally. Earlier research on teacher expectations as they are communicated to students showed that most teachers who think they are calling on students randomly actually call on higher-achieving and assertive students more often than on low-achieving or shy students.[14] As a result, those students who most need opportunities for practice with feedback have fewer opportunities to participate actively.

Students in the higher grades have less need for overt practice and individualized interaction with the teacher, because they are better able to learn by attending to the teacher's presentations to the class and through interactions with their peers. Thus presentations to the whole class become the usual mode for introducing new material, and remedial activities take place in small groups. The teacher's need to interact overtly with each student gives way at this level to the need for more briskly paced lessons directed to the class as a whole. In fact, in the higher grades it is often counterproductive for teachers to interrupt large-group activities for any length of time in order to deal with concerns specific to individual students, because this may lead to loss of lesson momentum and student attention.

Even in the higher grades, however, teachers must monitor students' independent work closely and provide necessary assistance and feedback. Students left on their own too long are likely to become distracted or to develop misconceptions about the content — even if they do remain on task and are able to produce correct answers.[15] Inner-city students in particular profit from structure and teacher guidance.

8. *A supportive learning environment.* It is important to note that effective teachers maintain a strong academic focus within the context of a pleasant, friendly classroom. Highly effective teachers clearly stress cognitive objectives, but they do not come across as slave drivers, and their classrooms do not resemble sweatshops. They maintain high standards and demand that students do their best, but they are not punitive or hypercritical.[16] Instead, students perceive effective teachers as enthusiastic and thorough instructors whose classrooms are friendly and convivial.[17] Such teachers are supportive of students, especially those who may be inhibited, frustrated, or alienated.

"The research of the Seventies . . . validates many of the practices that teachers have found to be effective in their own classrooms."

Much of this support is instructional. Students who have difficulty mastering material receive more structured learning experiences, more detailed and repetitive explanations, more frequent and individualized opportunities to respond and obtain feedback, shorter and more closely monitored assignments, and more continuous general direction and supervision. Support also takes more personal forms. Effective teachers obtain maximal performance from discouraged students not by demanding it (with implied rejection or punishment for failure to deliver), but by fostering such performance gradually through praise, encouragement, expressions of appreciation for effort, and attention to evidence of genuine progress. Their long-range goals include turning these students into confident independent learners. In the meantime, they are willing to provide the students with whatever extra direction and support they may need.

The research of the Seventies is encouraging, because it demonstrates that all students, including inner-city students, can be taught effectively. It is also reassuring, because it validates many of the practices that teachers have found to be effective in their own classrooms. The instructional implications of this research seem simple, but this does not make them easy to implement.

Effective teachers — teachers who do all the things I have mentioned above — are not "ordinary" teachers. They are probably brighter and more dedicated than average. They are certainly better organized and more efficient classroom managers, better prepared and more thorough instructors. The successes represented by their students' test scores are the cumulative result of daily planning, thorough preparation, and simple hard work. Teachers cannot realistically expect consistent success if they are not willing and able to supply these ingredients.

There are limits, however, to what even the most dedicated and talented teachers can accomplish on their own. It is difficult to maintain an academic focus when classroom activities are frequently interrupted by announcements on the intercom or hallway noise. More can be done with a class of 20 students than with a class of 40, and more can be done when the class contains only one or two disruptive students than when it includes six or eight. Issues of school funding, policy, and administration influence the effectiveness of teachers.

The research of the Seventies has revealed a great deal about effective instruction of inner-city students in basic skills. But these findings will not necessarily prove easy to implement in classrooms. In any case, they can provide only part of a successful response to the challenge of creating effective inner-city schools for the Eighties and beyond.

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Ingredients of a Successful School Effectiveness Project

In five years Milwaukee's Project RISE has significantly raised the achievement levels of students in 18 elementary schools.

MAUREEN McCORMACK-LARKIN

In 1979 the local school board directed 18 elementary schools in Milwaukee to improve their achievement levels in reading, math, and language to reflect citywide or national norms. These schools were identified as the lowest achieving schools in the system. All were located in the central city and served a predominantly low-income and minority student population.

No changes were made in the administration or in teacher or student composition, and no additional monies were allocated to these schools. Yet achievement levels have increased significantly in the last five years.

Maureen McCormack-Larkin, who is on leave as a curriculum supervisor in the Milwaukee Public Schools, is currently involved in research related to effective schools. She is an officer of the National Council for Effective Schools and was project director of the Milwaukee Teacher Expectation Project and assistant to the director of Project RISE.

Educational Leadership 42 (March 1985): 31-37. Reproduced with permission of the Association for Supervision and Curriculum Development. Copyright (c) 1985 by the Association for Supervision and Curriculum Development. All rights reserved.

Figure 1. The Essential Elements of Effective Schools.

School Climate

1. Strong sense of academic mission
2. High expectations conveyed to all students
3. Strong sense of student identification/affiliation
4. High level of professional collegiality among staff
5. Ongoing recognition of personal/academic excellence

Curriculum

1. Grade-level expectations and standards in reading, math, and language
2. Planning and monitoring for full content coverage

Instruction

1. Efficient classroom management through structured learning environment
2. Academic priority evidenced in increased amount of allocated time
3. Key instructional behaviors (review and homework check, developmental lesson, process/product check, actively monitored seatwork, related homework assignment)
4. Direct instruction as the main pedagogical approach
5. Maximizing academic engaged time (time-on-task)
6. Use of the accelerated learning approach (planning for more than one year's growth)
7. Reading, math, and language instruction beginning at the kindergarten level

Coordination of Supportive Services

1. Instructional approach, curriculum content, and materials of supplementary instructional services coordinated with the classroom program
2. Pullout approach used only if it does not fragment the classroom instructional program, does not result in lower expectations for some students, and does not interfere with efforts to maximize the use of time

Evaluation

1. Frequent assessment of student progress on a routine basis
2. Precise and informative report card with emphasis on acquisition of basic school skills
3. Serious attitude toward test-taking as an affirmation of individual accomplishment
4. Test-taking preparation and skills

Parent and Community Support

1. Regular and consistent communication with parents
2. Clearly defined homework policy that is explained to students and parents
3. Emphasis on the importance of regular school attendance
4. Clear communication to parents regarding the school's expectations related to behavioral standards
5. Increasing awareness of community services available to reinforce and extend student learning

Project RISE

Since 1979 these schools have participated in Project RISE, which attempts to raise student achievement by systematically implementing the essential elements of effective schooling. These elements (see Figure 1) were derived primarily from the research and literature on school and teacher effectiveness and from the reported practices of other effective schools.

By the close of the 1983–84 school year, Project RISE had been operating for five years. Figure 2 charts the percentage of elementary students in Milwaukee's 107 elementary schools who scored average and above average on standardized tests. The most significant gains occurred between 1979 and 1983 and brought the Project RISE schools to the level set by the school board.

Among the RISE schools, several distinguished themselves from the rest in their exceptional rate of gains and

Figure 2. Percentage of Milwaukee Elementary Students Achieving Average or Above-Average Scores on Standardized Tests From 1975-76 Through 1983-84.

2nd and 3rd Grade Math

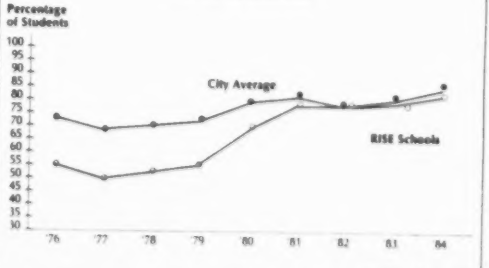

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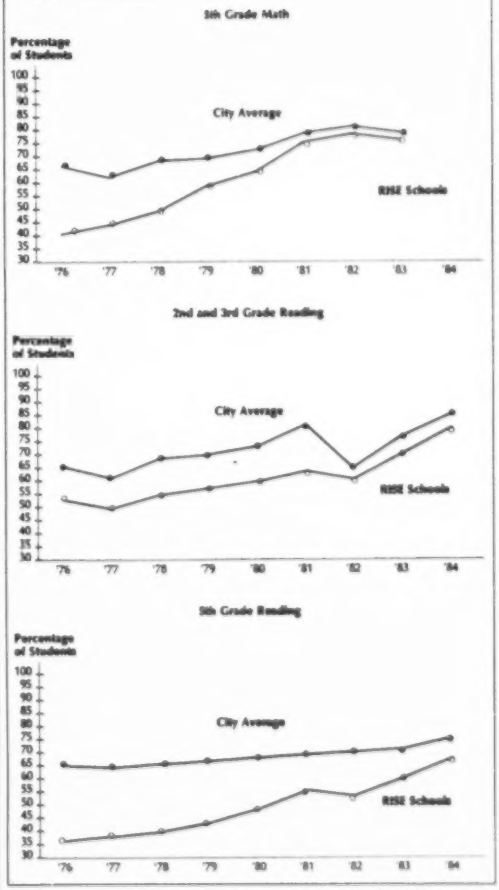
Figure 2. (continued).



high levels of achievement. Specific changes made by these fast-improving schools fall into four categories: changes in staff attitudes, changes in school management and organization, changes in school practices and policies, and changes in classroom practices. While each of the 18 schools in Project RISE may have made one or more of these changes, the fast-improving schools made most or all of them.

Changes in Staff Attitudes

Staff members verbally and behaviorally expressed the belief that all of their students could achieve regardless of socioeconomic status or past academic performance.

- Inservice activities that underscored the educability of all students were offered. These sessions were designed to re-educate misinformed personnel by refuting the individual deficit and cultural deficit theories that are commonly used to explain the underachievement of low-income and minority students. The school deficit theory was explained and the potency of school expectations emphasized.
- Staff members were encouraged to meet and establish networks with practitioners from effective schools throughout the country. RISE principals and teachers visited effective schools, and practitioners from these schools came to Milwaukee to share how they had changed their schools.
- Literature and reports related to the successes of schools that served low-income and minority students were disseminated among staff and reviewed on a regular basis, reinforcing the belief that low-income students can perform at high levels of achievement.
- Grouping practices and programs that identified some students as low achievers were abandoned.

Staff members indicated an improvement in their sense of self-esteem and efficacy as professional educators.

- Inservice activities included exchange forums wherein teachers would act as the consultants in pre-

William E. Hill, Montgomery Public Schools

"Principals involved teachers in important planning and decision-making processes, thereby generating a strong sense of ownership of their school."

senting successful methods and practices to other teachers, and principals would share their successes in various domains. This contributed to a shift from depending on outside educational experts to recognizing the expertise within their own ranks. Staff members from the fast-improving schools frequently volunteered or were asked to lead these sessions.

- Staff members (rather than the superintendent or central office personnel) acted as spokespersons for the school effectiveness program at local professional meetings, press conferences, university classes, and community forums. Thus, the practitioners who were responsible for the implementation and successes of the program were the ones to discuss the program and receive the recognition due.
- When visitors came to the schools, the principals shared with the staff the responsibilities involved in guiding tours, explaining the program, and recognizing the accomplishments of individual staff members and students.
- Staff members orchestrated their own professional development activities. Schools used their allocated funds to design their inservice, selecting the topics and presenters. A number of RISE principals and teachers led a professional education group called the League of Urban Educators. The League, which received no funding and met after school, was a voluntary

group of teachers, principals, central office staff, university professors, and business and community leaders, who met monthly in a prestigious university conference center to share a potluck dinner, listen to a presentation on an issue related to urban education, and discuss the issues raised in the presentation. For the most part, the presentations focused on the essential elements of RISE. Participating members report that the League elevated their stature as professionals, united people across role and status lines, and served as a professional support group.

Changes in School Management and Organization

Principals reported a change in their role as building manager to include being an instructional leader.

- Principals had the opportunity to meet with other principals from effective schools who emphasized the importance of being knowledgeable of the curriculum and of instructional practices, visiting each classroom on a daily basis, and concentrating the agenda of the staff meetings on instructional issues.

Principals involved teachers in important planning and decision-making processes, thereby generating a strong sense of ownership of their school.

- Principals in these schools loosened the linkages between central office and the school and strengthened the sense of school ownership, thus engendering the responsibility among staff for the school's successes or failures. One way they did this was by empowering the teachers in acting as advocates for the changes proposed by the teachers. For example, when teachers denounced the pullout approach used by supplementary programs as being disruptive and counterproductive, and recommended that all programs be conducted in their classrooms coordinated with the classroom instructional program, the principals supported the teachers in implementing this approach.
- Although all of the annual improvement plans were required to include the RISE essential elements, each school decided for itself how to best reach the project goals based on the unique characteristics of the school.
- School effectiveness committees assumed responsibility for making plans to improve school climate, reading and math achievement, and the school's evaluation program. Their plans were presented as recommendations at staff meetings for discussion, modification, and adoption.
- Principals established grade-level teams and arranged for them to meet on a weekly basis during the school day for planning, sharing, and coordinating their efforts.

Staff members expressed their recognition of the interrelatedness of their responsibilities and the need to work together as a unified system.

- During the program's five-year period, the schools operated less as a set of separate classrooms and programs and more as a unified body with interrelated and interdependent responsibilities. The principals heightened this awareness in a number of ways, for example, by emphasizing the responsibility each teacher had in seeing that students were performing at or above grade level. A 3rd grade teacher soon came to realize that all of the effort exerted to prepare her students for the 4th grade could be rendered meaningless if the following year the 4th grade teacher did not also work toward grade-level proficiency. The teacher also realized that the 2nd grade teacher's failure to prepare his students for the 3rd grade would create a burden for this 3rd grade teacher.
- Behavioral expectations were developed and consistently reinforced by all staff.
- Supplementary programs discontinued the pullout approach and worked with the classroom teacher within the classroom setting.

Changes in School Practices and Policies

A strong academic emphasis was clearly evident in the fast-improving

"Staff members verbally and behaviorally expressed the belief that all of their students could achieve regardless of socioeconomic status or past academic performance."

"A strong academic emphasis was clearly evident in the fast-improving schools, with a focus on acquiring basic skills."

schools, with a focus on acquiring basic skills.

- Because the majority of the students were performing far below grade level in 1979, staff members expressed the need to concentrate on reading, math, and language arts as a first step in improving student achievement. In 1984, staff members in the fast improving schools reported that the majority of their students are now performing at or above grade level, and that plans are now under way to move from effectiveness to excellence. These plans include broadening and strengthening the curriculum, learning better ways of teaching higher order skills, and possibly adopting computer programs, Great Books study clubs, and critical thinking projects.
- Extracurricular activities and assembly programs emphasized academic achievement by including competitive meets with the reading and math olympic teams, academic pep rallies, student recognition programs, oratorical presentations, debates, and so on.

The schools were characterized by well-maintained and orderly environments.

- Behavioral expectations were developed by the staff, and a commitment was made to consistently enforce them.
- The principal conveyed these behavioral expectations to the students at the opening assembly at the beginning of the school year, followed by a discussion of the expectations in each classroom.
- Behavioral expectations were printed in the student handbook and distributed to every parent.
- Student traffic in the hallways was reduced by the elimination of pullout programs.
- Some schools substituted outdoor recess with indoor study breaks throughout the day when students could casually interact, go to the lavatory, and so on.

The schools clearly articulated grade-level objectives and minimum standards within each subject area.

- Staff members were involved in the development of grade-level objectives and standards.
- Grade-level standards were defined as those skills, concepts, and learnings that are prerequisite for success at the next grade level.
- Grade-level standards were printed on "Yes I Can" sheets, reviewed with students, and distributed to parents.

The schools developed a school-wide policy that expected all students to complete daily homework assignments.

Terry Cavalli

"The schools clearly articulated grade-level objectives and minimum standards within each subject area."

- The rigorous nature of the homework policies was defended as necessary to bring underachieving students to grade-level proficiency.
- Principals and teachers enforced the policy by monitoring the doors at dismissal and sending empty-handed students back to their rooms to get their homework.
- Parents were informed if students were not completing their homework assignments and told that the students would be retained after lunch, during recess, or after school in the "homework center" to complete missing assignments.

The schools had schoolwide policies designed to protect instructional time from unnecessary disruptions and distractions.

- Some of the schools identified blocks of time in the daily schedule when the entire school would be teaching reading, math, and language arts. Interruptions such as public address announcements, requests from the office, pullout programs, and the like would not be allowed during these instructional periods.

Changes in Classroom Practices

Teachers planned to teach the entire grade-level curriculum content to every student.

- The grade-level objectives were organized into units of instruction, and teachers used content coverage schedules to plan on a yearly, weekly, and daily basis.
- Adjustments in the content coverage schedules were made throughout the year as some lessons required more or less time than expected.

Lessons were usually taught to the whole class and were supplemented with small-group corrective or enrichment instruction.

- Whole-class instruction was taught at the student's *grade* level, and small-group instruction was taught at the student's *performance* level.
- The pullout approach for compensatory education was replaced by an in-class delivery of service. Support teachers were in classrooms during the instructional lesson, which prepared them to supplement the instruction.
- Precautions were taken to avoid ostensibly identifying or labeling students as Title I students or as the "slow group."
- Grouping was flexible, and outside observers commented that they were unable to identify the slow learners.

Instructional lessons were highly structured and generally included the key instructional behaviors.

- These behaviors were identified as: a review of the previous lesson and homework check, a developmental lesson using direct instruction, a process-product check for understanding, actively monitored seatwork, and the assignment of a related daily homework assignment.
- Staff members reported that the systematic and structured instructional format helped maintain order by minimizing the opportunity for disruptive behavior and increased the academic engagement of the students.

Teachers expected their students to perform at or above grade level, and used remedial measures to help underachieving students advance to grade-level proficiency.

- Teachers used some form of accelerated learning. This was described as an intervention strategy intended to help underachieving students make more than a year's gain in a given school year. This curriculum design and instructional approach included concentrated instruction that focused on the essential content included within each of the preceding levels.
- When many older students complained that they were embarrassed to carry home books that were years below their grade level and that younger students were using, the schools prepared and distributed book covers with the school's name and logo to all the students. Soon the underachieving students began bringing home the books and assignments needed to help them advance to grade-level proficiency.

Concluding Remarks

Project RISE appears to be a promising example of the successful implementation of the school effectiveness and teacher effectiveness findings. The project schools began with a clear vision of what an effective school is (one performing at or above national norms in reading, math, and language arts, with no disparity based on race or class); they used the school effectiveness correlates as a framework for developing their own plans, and they implemented these plans in a systematic and self-conscious manner.

The RISE practitioners are modest when discussing their accomplishments. They are obviously proud of the gains their students have made, but are quick to point out that becoming an effective school is only a first step. Narrowing the educational agenda was a necessary prerequisite in turning their schools around, but now they are eager to accept the challenge of converting their effective schools into excellent schools □